

Drug Use as a Social Ritual:
Functionality, Symbolism and
Determinants of Self-Regulation

*Grund, Jean-Paul C. Drug Use as a Social
Ritual: Functionality, Symbolism and
Determinants of Self-Regulation. Rotterdam:
Instituut voor Verslavingsonderzoek, 1993.*

TABLE OF CONTENTS

Part I: The Study of Drug Taking Rituals	p.3
<u>Introduction</u>	p.4
<u>The Concept of Ritualization</u>	p.11
<u>Description of the Study</u>	p.41
<u>Heroin Rituals</u>	p.67
<u>The Nesting of Cocaine in Heroin Rituals</u>	p.81
<u>Transitions Between Rituals of Administration</u>	p.110
<u>Rituals of Regulation: Instrumental Functions of Solitary Drug Use Ritual</u>	p.122
<u>Symbolic Elaboration in Solitary Drug Use Ritual</u>	p.137
<u>Drug Use as a Social Ritual</u>	p.148
Part II: Drug Use Rituals, Health Problems and Drug Policy	p.173
<u>Health Consequences of Chasing and Injecting: A Comparison</u>	p.174
<u>Drug Sharing and HIV Transmission Risks: Frontloading and Backloading among</u>	
<u>Injecting Drug Users</u>	p.195
<u>The Sharing of Needles and Other Injection Paraphernalia: An</u>	p.208
<u>Ethnographic Analysis</u>	
<u>Is Needle Sharing a Ritual?</u>	P.227
<u>Reaching the Unreached: Targeting Hidden IDU Populations with Clean Needles via</u>	
<u>Known Users</u>	p.251
<u>Changing Cocaine Smoking Rituals in the Rotterdam Heroin Using</u>	
<u>Population</u>	p.261
<u>Drug Use Contexts and HIV-Consequences: The Effect of Drug Policy on Patterns of</u>	
<u>Everyday Drug Use in Rotterdam and the Bronx</u>	p.276
Part III: Self-regulation, Drug Culture and Drug Policy	p.300
<u>Social Determinants of Self Regulation in Psychoactive Drug Use: Towards an</u>	
<u>Explanatory Model</u>	p.301
<u>Drug Culture and Drug Policy: Implications for Future Development</u>	p.320
<u>Summary</u>	p.365
<u>An Overview of the Conclusions</u>	p.375
<u>Glossary of Medical Terminology</u>	p.378

Part I: The Study of Drug Taking Rituals

INTRODUCTION

Contents

A Study of Active Drug Users

A Guide to the Text

Illicit Drug Use in The Netherlands: A Birds-Eye View

References

A Study of Active Drug Users

This dissertation brings together results of my NWO*-funded ethnography --into the drug taking rituals of regular users of heroin, cocaine and other psychoactive substances--, resulting studies and some twenty years of puzzlement and subsequent pondering. The NWO study was initiated in the former Erasmus University Institute for Preventive and Social Psychiatry (IPSP) by professor Charles D. Kaplan and the late institute director professor Kees Trimbos. The work was completed within the walls of the new-born Instituut voor Verslavingsonderzoek (IVO), Addiction Research Institute, and the safety of my home.

The assumed failure of users of illicit drugs to conform with common standards of socially appropriate conduct is directly associated with the use of a substance which supposedly renders them powerless. This image is not only part of popular wisdom, but, in different forms also recognized in several scientific theories.¹ Many theories emphasize the powerful pharmacological properties of psychoactive drugs. others relate (problematic) substance use to f.e. deficient personality structures, ego problems, impaired psychological development, acute distress or psychiatric problems. Again other theories associate drug use with environmental deficits, such as poverty. All of these factors may, indeed, explain part of the phenomenon, but the frequent emphasis on only one aspect, be it a pharmacological, psychological or social factor, is in my opinion erroneous. Until now, none of these schools has produced specific correlations between cause and effect (2, 3, 4). A number of recent studies have questioned these (rather) mono-causal explanations and emphasized the multi- dimensionality of drug taking behaviors (5).

My personal position in this matter results from a strong interest in the phenomenon of drug use per se. While most theories regarding substance use are based on captive, in particular clinical samples of problematic users, I think that, if we are to get to the bottom of it, we must study the phenomenon primarily in its natural arena. Thus, carefully observe individuals when they do what they do, where, with whom and why they do it, without the blinders of preconceived notions. To do so, the researcher must enter the community under study, largely similar to the classical cultural anthropologist who studies a traditional society (6). The resulting analysis must be grounded in the study subjects' experience and perception of their environment (7).

The basic material of this thesis is presented by an ethnographic study of regular users of heroin and cocaine in Rotterdam, the Netherlands. Relying largely on participant observation, this study describes patterns of use, their functions, meanings and determinants. A crucial aspect of this study has been the employment of a community fieldworker, a respected community member who played a decisive role in establishing a research alliance between the traditionally separated worlds of research and drug use. The other studies address specific aspects of the observed behaviors, for example the impact of policy, their health consequences and --how could it not-- their relationship with that cryptic little time bomb, the Human Immunodeficiency Virus; perpetrator of the post-modern plague, Acquired Immune Deficiency Syndrome.

An explicit assumption of this study has been that the observed behaviors serve both instrumental and symbolic goals, and that these are not fundamentally different from those of other human beings. To operationalize these complementary perspectives, the concept of ritualization has been utilized. Ritualization is thus the common denominator of the studies presented in this dissertation. Ritual is a basic interaction unit of culture. Studying ritualization processes reveals essential information on the determinants and consequences of the behaviors and beliefs intrinsic to a culture. The main goal of this research has been to discover the functions and meanings of (ritualized) drug related behaviors. The most important finding is that these (social) behaviors provide the infrastructure for self-regulation processes controlling drug use. Based on the presented material and recently accumulated literature, I propose a

model of self-regulation in intoxicant use which challenges many of the currently fashionable theories on substance (ab)use.

A Guide to the Text

This dissertation is presented in three parts. part I (chapters 1-9) introduces the NWO study and presents the ethnographic analysis of the observed drug taking rituals. Chapter two will introduce the notion of ritualization, discuss its utilizations in studies of drug use behaviors and investigate conditions of ritualization. Chapter three presents the research questions and discusses the terms and definitions used in this thesis. Ensuing it introduces the participant observation study, and describes some characteristics of the study participants. Chapter four to six will present extensive descriptive analyses of the ritual behaviors observed in this research (research questions 1.1, 1.2 and 1.6). In chapters seven to nine this analysis is deepened, centering around both the instrumental and symbolic functions of the drug related ritualized behaviors (research questions 1.3, 1.4, 1.5, 1.6 and 1.7)

Part II (chapters 10-16) presents studies focussing on the health consequences of the drug administration rituals, featuring HIV and their relationships with drug- and health policy. Chapter ten will compare the health consequences of injecting and chasing (research question 2.1). Chapter eleven is an in depth analysis of drug sharing among IDUs and its risk potential for the spread of HIV (research question 2.2). Chapter twelve analyzes the cases of unsafe injecting behavior observed in this study (research question 2.3) and chapter thirteen will discuss the question of whether or not needle sharing can be considered a ritualized interaction (research question 2.4). Chapter fourteen presents an example of a cooperation model of outreach work and active drug injectors in distributing needles to hidden populations of IDUs, that is in line with the findings of this study (research question 3.2). Chapter fifteen and sixteen consider the influence of drug policy factors (research question 3.1). Chapter fifteen examines the cocaine smoking rituals found at two different research sites and chapter sixteen compares the drug use contexts of Rotterdam and

the Bronx, New York, and the HIV implications of the different drug policies found in both locales.

Drawing on the preceding studies, part III of this dissertation consists of two chapters on the determinants of drug use management and self-regulation, on an individual, as well as on a cultural level. Chapter seventeen will present and discuss the model of drug use self-regulation (research questions 1.7, 1.8 and 1.9), while chapter eighteen puts this model in a cultural context and addresses the relationships between drug cultures and drug policy. This final chapter will further present recommendations for future development of research, policy and practice in the areas of drug use and HIV (research questions 1.8, 1.9, 3.1, 3.2 and 3.3).

Some of the presented studies have been published as separate articles. Where this is the case this is reported at the opening of the chapter. As a result, some overlap between the chapters has been inevitable.

Before introducing the concept of ritualization, the remainder of this chapter will present a brief overview of the history of illicit drug use in the Netherlands after 1960.

Illicit Drug Use in The Netherlands: A Birds-Eye View

Initial Experiments

The first signs of illicit drug use in The Netherlands could be observed in the beginning of the 1960s. Cannabis was the drug, and its incidence was rising fast. At the end of the 1960s "stuf" (hashish) and "wiet" (marihuana) were followed by LSD and the like. Then, through literature and pharmaceutical handbooks, young white males, mostly, discovered opium, opium derivatives, cocaine and the amphetamines. Cocaine was not readily available, and expensive. Opium became available to these experimenters when they discovered the Netherlands' Chinese community. These Chinese opium sellers knew from ongoing experience and tradition, what the Dutch (and the British) remembered only vaguely from repressed memories of their recent history (8) --opiates are merchandise-- and they were willing to sell. Amphetamines

could be obtained via at least two channels --illegally processed or from medical sources, on prescription for weight worries, depression and fatigue (9). Many sincere experimenters used the Pharmaceutical Desk Reference's descriptions of symptoms as a textbook and they were serious scholars.

Heroin

Around 1971/1972 heroin became widely available in the Netherlands. The remaining experimenters and more dedicated multiple drug users, in particular those injecting opiates or amphetamines, were the first groups to experience heroin. The intensity of the first experiments with heroin initially suppressed and masked additional drug use among these users.* As a result, with the introduction of heroin, the phenomenon of drug use was redefined from "drug problem" to "heroin problem," and moved into a new and highly turbulent phase. From that moment on, heroin and its initial users went their own way. Soon (1972 - 1975) they were joined by a completely new user group with an entirely different socio- demographic and cultural background and little drug experience --the Surinamese. Shortly after, a significant number of South Moluccan users followed, and around 1975, after heroin entered mainstream discotheques, another group --blue collar white Dutch adolescents-- appeared on the scene. This group, which previously had limited their drug use to tobacco and alcoholic beverages, progressed very fast from cannabis to heroin. At the end of the 1970s a second generation of young adolescents with similar socio-economic characteristics followed. Somewhat simultaneously, second generation immigrants, in particular Moroccans, became involved in heroin use (10, 11). Awareness of heroin use in this group came about in the early 1980s (12, 13). Around 1985, the group became a political priority and by 1986 the first research on this group was published (14, 15). Indeed, the Moroccans were getting more and more involved in heroin. Turkish users, at the time however, were unusual (15).

Since the middle of the 1980s, the number of heroin users seems to be stabilizing: between 20.000 and 30.000 (16, 17). There is little reliable data on the ethnic distribution of the total group. Methadone intake data from Rotterdam (RODIS) shows that 2058 individuals were registered in 1989 (73% __ and 27% __) with a mean age of 30.1: an increase of 0.8 year in comparison to 1988. 64% were native Dutch, 17%

Surinamese and Dutch Antilleans, 5% Moroccans, 1% Turks and 13% came from other countries or were unknown (18). Although there is some definite growth among North Africans, the methadone using population in Rotterdam at large seems to be stable. Comparable 1990 data from the Centralized Methadone Registration in Amsterdam shows that methadone was dispensed to 4805 individuals (74% ___ and 26% ___) with a mean age of 32.5. 40.2% were native Dutch, 16.8% Surinamese and Dutch Antilleans, 3.6% Moroccans, 0.8% Turks, 11.3% Germans, 5.8% Italians and 21.6% came from other countries or were unknown (19). As in Rotterdam, the methadone using population is rather stable and aging, but is more than two years older than the Rotterdam population. The ethnic distributions in the two cities are rather similar.

Cocaine

The early 1980s was also the period in which cocaine made its way up; into post modern entertainment and the ranks of the young urban unemployed and their working counterparts. In these groups, use of cocaine, seemingly, has not lead to massive problems (20). But, almost simultaneously cocaine has also taken the stairs down. Already in 1981, heroin and cocaine were sold together on the Zeedijk in Amsterdam. In the following chapters it will be shown that smoking is the dominant administration ritual for both heroin and cocaine in this group of heavy users. Cocaine is smoked in a self prepared base form, similar to crack. However, in recent publications, Engelsman writes "crack use is a rarity" and "Crack has still not reached The Netherlands"(16, 21). Such discrepancies underline the importance of ethnographic research for drug policy making.

Psychedelica Revisited

Finally, in 1987 MDMA (XTC or Ecstasy) use emerged, predominantly in the House music scene, and reached both new users with minimal or no experience with other illegal drugs, and users with a varied experience of other illegal drugs. Related substances such as amphetamine, LSD and psilocybin may also have gained some popularity (22, 23, 24). In the concluding chapter this phenomenon will be further investigated.

References

1. Lettieri DJ, Sayers M, Wallenstein Pearson H: Theories on drug abuse: Selected contemporary perspectives. NIDA Research Monograph Series. Rockville: NIDA, 1980.
2. Sergeant J: Ontwikkelingsaspecten vanuit klinisch psychologisch perspectief. Presented at SIGO Symposion Addictive Behaviors, Amsterdam, 30-12-1992.
3. Gunning WB: "Nature and Nurture": Aspecten in de ontwikkeling van verslaving. Presented at SIGO Symposion Addictive Behaviors, Amsterdam, 30-12-1992.
4. Kornet LMW: Gedragsfarmacologische aspecten van alcoholverslaving: Experimenteel onderzoek bij rhesusapen. Presented at SIGO Symposion Addictive Behaviors, Amsterdam, 30-12-1992.
5. Zinberg NE, Harding WM: Control over intoxicant use: pharmacological, psychological and social considerations. New York: Human Sciences Press, 1982.
6. Turnbull CM: The mountain people. New York: Simon & Schuster, 1987.
7. Strauss AL: Qualitative analysis for the social sciences. Cambridge: Cambridge University Press, 1987.
8. Vanvugt E: Wettig Opium. Haarlem: In de Knipscheer, 1985.
9. Ree F van: Drugs; verslag in de breedte. Utrecht / Antwerpen: Het Spectrum, 1977.
10. Gelder PJ van, Sijtsma JH: Horse, coke en kansen: Sociale risico's en kansen onder Surinaamse en Marokkaanse harddruggebruikers in Amsterdam. II Marokkaanse harddruggebruikers. Amsterdam: Instituut voor Sociale Geografie, UvA, 1988.
11. Gelder PJ van, Sijtsma JH: 'Ik wil een smalle weg volgen.': Sociale risico's en kansen onder werkloze Marokkaanse jongens in Den Haag. Den Haag: Regionaal Centrum Buitenlanders Zuid-Holland West, 1990.
12. Interimnota alcohol en drugs 3. Onderzoeksproject Alcohol en Drugs. Den Haag: Provincie Zuid-Holland, 1983.
13. Vos F de: Een verlaten generatie? een situatiebeschrijving van de drugsproblematiek onder Turkse en Marokkaanse jongens in Utrecht. Utrecht: CAD-Cahiers.
14. Werdmölder H: Van vriendenkring tot randgroep: Marokkaanse jongeren in een oude stadswijk. Baarn: Het Wereldvenster, 1986.
15. Kaufman P and Verbraeck HT: Maroccaan en verslaafd: Een studie naar randgroepvorming, heroïnegebruik en criminalisering. Utrecht: ROVU, 1987.
16. Engelsman EL: Drug misuse and the Dutch: A matter of social well-being and not primarily a problem for the police and the courts. BMJ 1991; 302:484-485.
17. Bilsen H van: Moraliseren of normaliseren. Tijdschrift voor Alcohol, Drugs en andere Psychotrope stoffen 1986;12(5): 182-189.
18. Toet J: Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
19. Reijneveld SA: Methadonverstrekking in Amsterdam in 1990: Jaaroverzicht van de Centrale Methadon Registratie. Amsterdam: GG&GD Amsterdam, Stafbureau Epidemiologie en Documentatie, 1991.
20. Cohen P: Cocaine use in Amsterdam in non-deviant subcultures. Amsterdam: University of Amsterdam, 1989.
21. Engelsman EL: Dutch policy on the management of drug related problems. British Journal of Addiction 1989; 84:211-218.
22. Nabben T: Paddestoelenwereld. Amsterdams Drug Tijdschrift 1991; 8(3): 7-9.
23. Korf DJ: Trends in hallucinogenen. Amsterdams Drug Tijdschrift 1991; 8(3): 9.
24. Nabben T: Trip met Gorbatsjov. Amsterdams Drug Tijdschrift 1992; 9(1): 5-7.

THE CONCEPT OF RITUALIZATION

Contents

Introduction

The Concept of Ritual in the Social Sciences

The Concept of Ritual in Studies of Drug Use

References

Introduction

"Ritual events required a period of preparation, lengthy fasting and sexual abstinence, scalding steam baths, and blood penance. Ritual books were consulted, the propitious calendrical co-ordinates plotted, positions of the moon, planets, especially the baleful Venus were noted. Extended chanting, recitations of past experiences by initiates, careful attention to the refinements of dress, adjustments of masks, rehearsing of dance movements and recitations practiced. Finally the numbing rhythms of percussion orchestras, drums rattles, scraped turtle carapaces, pierced by whistles and conch trumpets. Preliminary animal sacrifices and the burning of clouds of copal incense; lengthy preparations needed to condition the shaman and ready his psychological and physical state for the ordeal to come" (1).

This example of an elaborated religious ritual will probably meet with many people's depiction of ritual. It has all the exotic elements of popular representations in magazines, movies and television, of ritual in, so-called, primitive culture. And indeed, it contains some of the key features of ritual. It presents an extraordinary event, that requires thorough preparation, rehearsal, distinctive materials and symbols. It also gives a sense of show or play --Lights, Camera: Action! Theatrical as this event may seem, it is more than just a well directed performance of a group of actors. Rather, the performance has intrinsic value to its players. "Rituals are highly meaningful, rationalized by a system of beliefs" (2). The ritual is meant to bring about a state of consciousness, different from the ordinary, that enables its performers to

accomplish a task that is outside the realm of everyday routine, and for that reason requires an altered physical and/or psychological state of being.

However, rituals are not always so elaborated, extravagant or recognizable, so obviously set aside from day-to-day practice. In much simpler forms rituals can be observed in everyday life (3). Lighting a cigarette when entering an unfamiliar social setting or simple greeting behaviors are common forms of ritual. Greeting rituals, for example, can differ significantly between and within cultures. Shaking hands, bending the head, a kiss on the cheek, or kissing the hand can all be appropriate in one culture, but out of touch or even insulting in another. Such differences can be very subtle; just touching cheeks or an actual kiss on the cheeks; one kiss or three. Within the same culture, by the same person some others are greeted by a nod or a hand, some by a superficial kiss and some by an ardent embrace. Given the same individual and the same other the appropriate ritual can even vary according to the situation, mood, or the outcome of a former encounter. Such greeting behaviors seem to have three functions: they facilitate "the opening of a channel for communication and interaction; the[y] defin[e] role and status; and they are acting as a means of manipulating relationships to secure a specific result" (4). The behavioral sequence of smoking the first cigarette after waking up, the first cup of coffee and the subsequent visit to the bath room can be a ritual. A former colleague once explained, that in the morning he needed to drink, at least, four cups of coffee before getting started, otherwise he could not function throughout the day (5). Was this because of a chemical dependency on caffeine or did the process surrounding the actual administration of that drug, e.g. the thoughts anticipating the day to come while sipping the coffee, also play a role? Ritual is a prosaic phenomenon in human life. Ritual is commonly referred to in social scientific discourse and in lay conversation. What is actually meant by ritual is however often taken for granted; it is not made explicit. In casual chat this can lead to minor confusion. In the realm of science such omission can result in more serious consequences. In many elaborated theories on drug use, terms and concepts often stay ill defined (6). At times resulting in poorly or ungrounded statements about drug abusers, addicts and junkies, their behaviors, and, in the context of the AIDS era, their abilities for behavior change.

This thesis deals with drug taking rituals. Therefore, this chapter explores the concept of ritual --what constitutes a ritual and what are the functions, meanings and values for participants?-- and its application to studies of drug use.

The Concept of Ritual in the Social Sciences

The Behavioral Sequence of Ritual

The term ritual refers to behavior. However, not all behavior --"the total response, motor and glandular, which an organism makes to any situation with which it is faced" (7) -- is ritual behavior. Ritual addresses a unique class of observable behavior. The notion is reserved for a specific behavioral sequence of acts and signals which, "allows no uncertainty, no choice" (2). Consequently, ritual is fixed. Turning to the anthropological and sociological literature for a useful definition of ritual one finds formulations that have certain components in common, and at the same time, diverge significantly. "A definition of ritual such as might be applicable to the term in all its acceptations is difficult, ... not because the term is widely used, but because it is not possible to determine the true nature of what constitutes the irreducible basis of the myriad human practices it represents" (8).

Durkheim calls ritual "determined modes of action" (9). According to Wallace, "ritual may be defined as stereotyped communication, solitary and interpersonal" (2). To Goody ritual refers to "a category of standardized behavior (custom) in which the relationship between the means and the end is not intrinsic; i.e. is either irrational or non rational" (10). Carter states that a ritual "must involve repetitive action, be kept in limited contexts, reflect basically uncritical acceptance of some value, quality, attitude, or belief, and in some way convey to the individuals hope that he will be helped in coping with his situation and in facing life with renewed vigour and confidence" (11). For Partridge "the defining feature of ritual is that of a repetitive, reassertive form. Ritual as an ordered statement of pattern against randomness, order against idiosyncrasy" (12). Nadel defines rituals as "actions exhibiting striking or incongruous rigidity, that is, some conspicuous regularity not accounted for by the professed aims of actions" (13). Turner specifies the features that are involved in such stereotyped behavior chains: "gestures, words, objects" and limits the place of performance; this should be a special "sequestered" place (14). All these definitions have in common the requirement of a fixed and predictable behavioral sequence

distinguished from activities without fixed order and with unsure outcome, such as driving a bicycle or car. Thus, ritual behavior is stereotypical behavior; the course and outcome of the behavioral sequence are rather fixed and predictable.

Special Meaning

The standardized sequence is a necessary but not a sufficient criterium as can be seen in some of the above definitions. If so, actions such as sorting mail in a post office, work on an assembly line and other forms of equally stereotyped technical acts would also qualify. In such acts the meaning is uni-dimensional. In ritual, the act has meaning beyond its performance. Ritual is thus symbolic action, "a representation of reality at a certain level of reference by a corresponding reality at another" (8).

Sacred versus Secular

The concept of ritual has often been examined in the framework of studies of religious behavior. For this reason, the discussion has often centered around the sacred properties of rituals --Ritual as a medium between men and their Supreme Being(s). This orthodox approach reserves the term ritual for magical and religious behavior and stems from Emile Durkheim's distinction between the sacred and the profane. "Religious phenomena are naturally arranged in two fundamental categories: Beliefs and rites. Beliefs are states of opinion and consist in representations. Rites are determined modes of action. Between the two classes of facts there is all the difference which separates thought from action." "The rites can be defined and distinguished from other human practices, moral practices, for example, only by the special nature of their object" (9). Rituals address a different class of objects --the sacred. As Malinowski puts it: "Every culture can be divided into two distinguishable domains: the domain of magic and religion and the domain of science; the sacred and the profane. Ritual belongs to the sacred domain and is ipso facto an action grounded in faith rather than in reason" (15).

However, such rigid opinions have been criticized, because "the values that prompt and sanction the performance of ritual are also, generally speaking, the same values that motivate people in their daily lives" (2). Ritual actions can then be seen as displays of the cultural values, as part of a non-verbal system of communication (16). Moreover, the erosion of the power of traditional religious institutions has (at least in parts of the western world) led to a substantial decrease in importance of the sacred

(11). Then "the popular distinction between the sacred and the profane does not seem to be a sound basis for distinguishing rituals from ordinary day-to-day practices. It is in fact the ritual touch which makes certain practices sacred, not that an act becomes ritual because it happens to possess a sacred character" (8). When sacred becomes more-or-less disconnected from its religious context and is merged with a more general notion of special meaning, then "any type of behavior may be said to turn into a ritual when it is stylized or formalized and made repetitive in that form" (13). Many authors who started with the idea that social actions either belong to the sacred or the profane, concluded that this distinction is, in fact, not realistic. In the words of Edmund Leach: "[I]t is a scholastic illusion to suppose that human actions are everywhere ordered to accord with such discriminations" (17). Thus, "ritual refers to all symbolic behavior and is not to be confined to actions associated with religious institutions"(16). As a result, Goody's requirement that "the relationship between means and end is not intrinsic" seems a more modern interpretation which may be derived from this loss of importance of the sacred.

Instrumental versus Symbolic

According to Radcliffe-Brown, ritual acts stand in direct contrast to technical acts. "In technical activity an adequate statement of the purpose of any particular act or series of acts constitutes by itself a sufficient explanation. But ritual acts differ from technical acts in having in all instances some expressive or symbolic element in them" (18). Consequently, ritual activity is always in pursuit of ritual value with the exclusion of direct purposiveness. In this perspective, ritual action cannot be put in a means-end scheme. It is not a means to an end, but an end in itself (9, 15). But in many ritual practices it is not always easy to distinguish between instrumental and symbolic action (especially in drug use rituals) "There is a continuum of action stretching from the purely technical to the purely symbolic. While the poles are clearly defined there are points between them that are difficult to place in either category" (19). Moreover, "in spite of its essentially non purposive character, [ritual] can always be transformed into purposive action. Use of ritual procedure for the fulfillment of practical needs of life is a common feature of all organized religions" (8). It is thus hard to differentiate between technical purposiveness and ritual symbolism in stereotyped behavior. For La Fontaine it is a question of proportion. "A preponderance of symbolic over

technical action (however technical the actors may consider the purpose of the rite) is what marks of ritual from the customary performance of technical acts" (19).

Here one also gets confronted with a possible discrepancy between explanations given by the participants of rituals and those of the observer/analyst. Both Malinowski and Radcliffe- Brown attach little importance to the actors' notions of meaning and functions of the rituals they perform. In their opinion actors (natives) are unable to give correct explanations as they have no comprehension of its real caliber, it is thus the responsibility of the analyst to do so (15, 18). However, in the context of contemporary studies of urban drug use in modern society, such a view point insults the ability of the actors who often have elaborate explanations for their activities (20). Moreover, the distinctions between the already hard to classify phenomena technical and symbolic may even be relative or arbitrary (19).

At this point, it can be asserted that ritual seems to refer to stylized behavioral sequences with fixed pattern and outcome, in which the symbolic meaning (not necessarily religious) has a preponderance over its technical purposiveness.

Formal Rituals versus Natural Rituals

Up to this point the discussion has been mainly concerned with so-called formal rituals. This section will review some different types of formal rituals, and so-called natural rituals and demonstrate that the distinctions between the two are more gradual than absolute.

Formal Rituals

A common distinction of formal rituals is that between calendrical rituals --those that occur on a regular schedule in some natural cycle (seasons, position of moon, planets, and stars, eclipses, etc.)-- and non-calendrical or critical rituals, which do not follow such cycles but are performed on occasions of crisis. Some rituals, such as rites of passage follow a life-cycle (2). Another distinction is based on the intended purpose of the rituals:

Rites of passage, such as initiation rites and ceremonies surrounding marriage, childbirth and death. "Rites de passage are rites which accompany every change of place, state, social position and age" (21).

A rite of passage has three stages --separation, transition, and incorporation. In the first stage the individual is taken out of his or her

familiar context. In the second, the individual is exposed to ritual actions meant to effect the intended transformation. In this phase the individual is sacred. Finally, the new status is formally established. In marriage, the bachelor party, wedding shower and separate preparations (dressing) on the marriage day are all examples of separation. The actual religious or civil ceremony and the wedding night signify the transition. The reception, party, the consequences of marriage like moving to a new house, the adoption of the man's name and, in some traditional communities, hanging the sheet of the marital night from the window, proving the breaking of the maidenhead, are incorporating activities, naturally following stage two. However, note that the demarcation between stages two and three is somewhat blurry as the reception and party normally precedes the wedding night.

Rites of intensification, including hunting and agricultural rites that aim at intensification of the fertility of crops and availability of game. These are, in contrast with rites of passage, group-centered (22).

However, not all rituals fit this scheme so neatly. Wallace proposes a "less abstract classification of the transformations intended by religious rituals, closer to the consciously stated purposes of the actors". He distinguishes five categories: (2)

Ritual as technology, intended to control various aspects of nature, other than man himself, for the purpose of human exploitation. This category includes divination, aimed at extracting useful information from nature when the actor(s) feel(s) a lack of information to base a decision on, such as dowsing or flipping a coin; The already mentioned hunting and agricultural rites of intensification, aimed at the mobilization, focussing and intensification of natural periodical processes; Protective rituals, that intend to prevent or avoid a diversity of ills and disasters, such as broken tools, fires, floods, plagues, etc., exemplified in blessing a ship or tool. They have in common that they are all pragmatic and are aimed at manipulating the environment into more favorable states.

Ritual as therapy and anti-therapy, aimed at controlling human health, especially in cases where the cause of disease or disorder are difficult to discover, such as infectious diseases, allergies, psychological complaints, etc. In these cases supernatural interference is often suspected. Witchcraft (anti-therapy) may be involved. Therapeutic rituals may be performed by laymen in case of minor problems. In more serious conditions a professional shaman will be necessary.

Ritual as social control or ideological rituals. These are intended to control, in a conservative way, the behavior, the mood, the sentiments and values of groups for the sake of the community as a whole. They intend to instruct, to direct, and to program individuals into accepted statuses, as they enter upon new tasks or situations. Examples are rites of passage, social rites of intensification (the sabbath, the mass, political party meetings) and (religious) taboos (e.g. on sexual intercourse between kinfolk or during menstruation) and courtesies (saluting, men holding the door for women).

Ritual as salvation from a state in which the identity is seriously impaired by social abuse or by an internal disillusionment. In such religious identity renewal the identification is with, or the differentiation is from, a supernatural being. Most cultures recognize at least some such identity problems in individuals, and provide culturally standardized ways for the unfortunate victim of identity conflict to achieve relief by way of possession; becoming a shaman; mystical withdrawal; or good works.

Ritual as revitalization when such identity crisis occur in large parts of, or in an entire, community. Customary individualized procedures for achieving personal salvation then loose their effectivity and a new religious movement is likely to develop, led by a prophet who has undergone an ecstatic revelation, and aimed at the dual goal of providing new and more effective rituals of salvation and of creating a new and more satisfying culture.

Interaction or Natural Rituals

It was Goffman who pointed at the similarities between formal religious rituals and the type of events that occur pervasively in everyday secular life, which he named interaction rituals (23). According to Goffman, "in gatherings or social situations -- physical arenas anywhere within which persons present are in perceptual range of one another, subject to mutual monitoring-- the individual is given an opportunity to face directly a representation, a somewhat iconic expression, a mock up of what he is supposed to hold dear, a presentation of the supposed ordering of his existence.

[Such] a single, fixed element ... can be called a ritual; the interpersonal kind can be defined as perfunctory, conventionalized acts through which one individual portrays his regard for another to that other" (24). Goffman refers to a wide range of both verbal and non-verbal practices used by communicating individuals, aimed at presenting and maintaining a positive and consistent image of self in a dialogue in which both parties express deference to the other's demeanor. Such face work often becomes habitual and standardized practice, and its goal is the maintenance or re-establishment of the ritual equilibrium, a state in which both interactants satisfactory maintain their face (image of self). When such ritual reciprocity is denied, the disrespected person experiences this as an assault on his identity or, as Goffman calls it, a threat to face, which may lead to extreme dismay. In this perspective interaction is a delicate ritual balance of, on the one hand, claiming a preferable position and, on the other, consideration for the position of the other(s). "Each person, subculture and society seems to have its own characteristic repertoire of face-saving practices" (23). Goffman did not mean that there are no differences between the formal religious rituals and the formalities of the casual rendezvous' of modern actors. His point is that in both phenomena similar general processes are at work. Recently, Collins suggested the term natural rituals "to refer to those kinds of conditions which crop up, typically without anyone's conscious intention, which have the same shape, and similar consequences, as formal rituals" (25). Collins proposes that a ritual, whether natural or formal, requires the following ingredients:

1. a group of at least two people are physically assembled;
2. they focus attention on the same object or action, and are aware that each other is maintaining this focus;
3. they share a common mood or emotion.

This third requirement seems, as Collins himself states, to miss the core of usual definitions of ritual --stereotyped action-- but, he explains, that are only the cosmetic aspects of formal ritual that bring about a state of mutual focus of attention. When these three ingredients are in existence, they affect the situation, "the mutual focus of attention and the common mood become progressively stronger" and the actors are united into "a shared reality" that separates their reality from what is outside, "they feel like members of a little group" (25).

Thus, the difference between formal and natural rituals mainly depends on the meaning that is added to them by its actors. The general mechanism seems to be the same. For example, rites of passage can be witnessed in both formal or religious and in natural or secular contexts. In that respect elaborated puberty rites in tribal societies do not principally differ from the initiation into a new friendship group or school class, or into (illicit) drug use. "Thus, when persons perform standardized acts in first using cannabis, they change from non-drug users to users, from persons who are immune from arrest under the drug law to potential convicts, from observers to participants" (26). From this perspective, formal rituals and natural rituals are merely the extremes of a common continuum.

Recapitulating, rituals are stereotypical behavioral sequences with a symbolic meaning, which, nevertheless, is not always expressively or consciously present. Moreover, considerable individual differences may exist between individual actors in validating the symbolic meaning.

Rituals of Animals and Early Man

Animals, too, display certain forms of behavior that can be classified under the heading of ritual. Such behaviors have been exhaustively documented by ethologists. Both birds and mammals behave in ways that are both characterized by stereotyped repetition and a lack of a direct instrumental relation between means and end. The most evident examples of social ritual among animals can be seen in mating, nest building, and conflict or fight over pecking order and territory. Such displays normally occur at the beginning and end of these events and, serving as a kind of primitive communication device. They are meant to create a situation in which the acting animal is incited to perform necessary conduct. In the case of a social situation, it encourages complementary attitudes, directed at the performance of certain deportments (e.g. courting before reproductive acts) or their inhibition (e.g. mock

battle instead of actual fighting) (2). Solitary animal rituals can also be observed. These behaviors are often found in response to intense but ambiguous stimulation, which surpasses the animal's information processing capacity, (27) and other stress provoking situations. Examples are rocking or circular pacing of cash-crop animals in bio-industry plants, animals in zoos, or bandogs. "Solitary rituals seem useful principally in reducing anxiety in situations of ambiguity with respect to learning or discrimination" (2). In other words, when they are put under stress, either by unnatural restraints or by an information overflow, animals turn to their automatic pilot in order to channel and ameliorate the experienced stress, and to prevent harmful responses.

The origin of those behaviors may be explained by the "argument that under the pressure of natural selection certain emotionally motivated behaviors become formalized --in the sense of becoming simplified, exaggerated, and stereotyped-- and loosened from any specific context of releasers, and all this so that, in effect, there will be more efficient signalling, both inter- and intra-specifically. Instead of having to play out an act [e.g. a destructive fight], the animal, in effect provides a readily readable expression of his situation, specifically his intent, this taking the form of a ritualization of some portion of the act itself, and this indication (whether promise or threat) presumably allows for the negotiation of an efficient response from, and to, witnesses of the display" (24).

Although there is only very limited information available, it can be assumed that ritual played some role of importance in the experience of modern man's predecessors. Both among Neanderthal and Cro magnon peoples evidence of religious ritual is found. Graves of both peoples have been excavated, containing the carefully arranged remains of humans and, for them significant, animals. More commonly among the Cro Magnons, the corpses were smeared with red paint. Cro Magnons, further buried their deceased with grave goods and personal ornaments and evidence of offerings and funeral feasts have also been found. Moreover, they manufactured objects from parts of the human skeleton, that were probably meant for ceremonial or ritual usage. But, perhaps the most dramatic evidence lies in their artistic performances; their sculpture and painting (2).

It can now be determined that ritual, being a routine form of animal behavior, serving a vital purpose, even in lower animal life, in promoting opportune conduct, has been

a continuity throughout history. It served the same functions in early man. Corresponding rituals are familiar to modern man. The distinction seems to lie in the self-consciousness of modern man's ritual action (2). The cultural and cognitive development that enabled humans to think in abstract modes led to rationalizations and explanations in religious terms and concept of historically intrinsic behaviors. The question to be answered now is what purposes serves ritual for modern man --what is its function?

The Function of Ritual

A discussion of function of ritual must start with a discussion of the term function itself. One generally agrees that "the function of a cultural element is the effect of its performance or non-performance in a given cultural setting" (2). Beyond this consensus, interpretation often parts, depending on the (professional) orientation of the analyst. For sociologist and social anthropologists, the function of ritual will incorporate statements on the effect on the group or society. Psychologists and psychiatrists will refer to effects on mood, thought and learning processes. Likewise, biologists or psychopharmacologists will, for example, point at changes in neurotransmitter levels that certain rituals may bring about. Clearly, such interpretations refer to only a part of the picture, they are complementary and not mutually exclusive (2).

The function of ritual not only depends on the type of analyst, but, of course, also on the level of analysis and the specific situation. "Rituals have various functions, depending on the conditions in which they take place" (12). Moreover, the function may differ for different actors in the same ritual. Ritual may have multiple meaning and, even further, these do not necessarily have to be in alignment with the intentions of the actors. Finally it must be clear that function cannot be looked upon in the light of cause. Cause, with its roots in the past, does not have to be meaningful for current intentions and effects. Rituals have thus multiple functions, of which some are more and others less obvious. Even "the most barbarous or bizarre rites and the strangest myths all express some human need, some aspect of life, be it individual or social" (9). As explained above, it is often depending on the analyst and the level of analysis which functions are emphasized.

Often rituals are related to the fulfillment of day-to-day activities and needs. "... In spite of its essentially non-purposive character, [ritual] can always be transformed

into purposive action. Use of ritual for the fulfillment of the practical needs of life is a common feature ..." (8). The desired results are then achieved through the effect the ritual has on its performer(s), both in solitary and social ritual --focussing the participants on certain practical tasks that have to be performed. Ritual activity quickly prepares an individual or individuals to execute an action with maximum efficiency. In case of one individual, this is accomplished by "resolving motivational conflict, reducing fear and anxiety, increasing confidence, focusing attention at the task at hand, and mobilizing appropriate psychophysiological systems for the execution of the act" (2). In social rituals, in addition, "the participants are brought more rapidly to the state of readiness for the cooperative execution of the act than is likely if mobilization and coordination were to depend upon less stereotyped communication" (2). In social ritual there is little ambiguity about mutual role taking and the participants are almost naturally aware of this (25).

Ritual activity as such can also induce actual pleasure as it gives rise to "what one might call an overproduction of thought, emotion and activity. The elaboration of these processes is accompanied by pleasurable emotion, it becomes an end in itself" (28). Indeed, it is not surprising that this is an important aspect in this study of human drug taking rituals.

Most of ritual's practical utility is, however, often believed to be secondary (8, 9, 28). The main emphasis in the analysis of ritual is on its social function. For example, the rites of passage have an important function in educating the young (8). Such rituals pass on the cultural heritage to novices and siblings and they teach the group rules by formal, and social learning procedures. In formal rites of passage novices are initiated into their newly acquired social status. However, in such ceremonies not only the initiates are touched as the values and beliefs that are at stake are those of the group at a very deep level (29). "The rite thus brings the people together and restores them to the true center of their consciousness" (8). In this sense, a ritual can be considered as a "condensed storehouse of a cultural tradition" (30).

Because most formal rituals were studied in a religious context "the apparent function is to strengthen the bonds attaching the believer to his god. [However,] they at the same time really strengthen the bonds attaching the individual to the society of which he is a member, since the god is only a figurative expression of the society" (9). The actual purpose of ritual is in the ritual itself --in the effect that its performance has on

the social consciousness (28). "When the groups periodically assemble to celebrate the rites, interpersonal relations are renewed and a new consciousness is produced among the individuals ... Their common bonds are reaffirmed, their group solidarity is reinforced and society is recreated" (8). Ritual is a symbolic expression of the group's doctrine (31) and helps to preserve its values (8). It controls and regulates social situations, (32) multiplies the relations between individual group members and makes them more intimate with one another (9).

Ritual furthermore displays the group definitions of role and status (4) and reinforces the hierarchical relations between people (17). The performance of ritual also hushes struggles and arguments between group members (8, 33). It counterbalances disturbing actions, conflict, danger, crisis, etc. by carrying the opposite message of unity, harmony and order in form as well as in content (34). In this sense ritual is a sort of corrective mechanism or in cases where some form of change or adaptation is inevitable, a transformative process (12).

The essential function of ritual seems thus its effect on the collective consciousness, the apprehension that perpetuates group norms directed at the survival of the group or tribe. "Man is a tribal animal" (35). Just as many other animals, humans find great pleasure and satisfaction in group membership, in interaction with their congeners, their tribe (25). The tribe is perhaps man's most important source of identification and self-definition. "[One] must fully appreciate this fact [to] understand one of the most important facets of human nature. ... The tribal qualities of the human species colour almost every aspect of our lives" (35). Ritual works as a binding mechanism (31) and engenders social solidarity among its performers -- the members of the tribe (36).

Such social solidarity is believed to be a basic and overriding human drive (37).

With this concern for social solidarity a moral solidarity has entered and with it moral pressures or rules of conduct (9). In order to live in a tribe and to act out feelings of solidarity, rules have been formed through rituals that regulate interaction. And here again, this refers to both formal and natural rituals. However, especially in modern society, such feelings of solidarity are not unlimited. In contrast with relatively small and isolated native societies, modern industrialized society is far from unified.

Although often referred to in their media campaigns, a lasting global solidarity is a myth, well nurtured by organizations such as Foster Parents Plan. Furthermore, traditional formal tribal structures are subject to serious erosion and have lost much

of their attractiveness and power. Secularization is a case in point. However, "In technological cultures such as those of the West, people have responded to the disappearance of formal tribes by consciously or unconsciously creating new ones" (38). As a result, society has become abundantly stratified and many different, and, often conflicting, tribes can make appeals on the individual (25).

The Concept of Ritual in Studies of Drug Use

Introduction

Psychoactive agents are primarily taken to alter the state of consciousness of the user. Altered states of consciousness (ASC) are universal human phenomena (39) and the use of a great variety of substances to achieve them is known throughout history. Indeed, the use of drugs is at least as old as mankind. Drug use "probably began when our ancestors browsed their way through the forests and found that, among the foods they sampled, some produced interesting changes in how they perceived, and how they could accommodate themselves to the world" (40). In his recent book, *Intoxication, life in pursuit of artificial paradise*, the American psychopharmacologist Siegel argues that the motivation to achieve an altered state of consciousness is a fourth drive; as important and part of the human condition as sex, thirst and hunger. Moreover, this drive to get high is not a monopoly of mankind at all. Siegel documents a large range of examples of drug consuming animals ranging, from insects to water buffalo's (41).

Besides utilizing other, non drug, methods of intoxicating oneself, such as religious ecstasy, ritual dancing, running, etc., psychoactive drugs have thus always played a mayor role in establishing ASC. Although societies may apparently differ in the value they place upon the drug high and the role it plays in the structuring and organization of social life, it seems evident that, in fact, in all historical and contemporary societies drugs do play important roles. ASC, being found in all human cultures, "are subject to a great deal of cultural patterning, stylization, ritualization, and rationalizing mythology" (39). Some notable contemporary examples are the chewing of Qat leaves in Jemen, the chewing of coca leaves in certain Andean cultures, the ingestion of a liquified extract of roasted coffee beans and the smoking of dried leaves of the tobacco plant in many cultures across the globe.

Indeed, all four examples can be interpreted in terms of ritual, though the intensity of stylization and symbolic meaning may differ. Both coffee and Qat are social lubricants of which Qat use seems to be the most ritualized. In Jemen, from two in the afternoon until the evening almost the whole male population is busy with the chewing of Qat, mostly in social settings. The very importance of the Qat ritual can be even more demonstrated by the fact that the Jemenite government takes all important decisions on a consensus basis during Qat sessions. "Qat chewing is serious business in Jemen" (42). In many cultures, it is standard practice to offer coffee or tea to visitors in both formal and informal settings to break the ice, i.e. creating a favorable atmosphere for communication through the mutual participation in the coffee or tea drinking ritual. Among indian cultures in the Andean region the traditional chewing of coca leaf has in addition to relieving fatigue and hunger, also a strong symbolic function, as it signifies their ancient and sophisticated cultural tradition (43). In other indian cultures, e.g. the Aymara in Peru and Bolivia, alcohol, which in western culture has a very profane status, is treated as a highly sacred ritual drug (11).

Drug Use Rituals

It is evident that drugs played an important role in human life throughout history. Often such drug use was integrated in the religious canon of the performers. While many early observers did report the presence of various psycho active substances, they mostly played a secondary role in their analyses of the behaviors of the group, community or society under study. It is relatively recently that social scientists started to focus on drug use as an unique object of study. An important stimulation has been the growing concern about the increase of recreational use of drugs in secular contexts. Studies of drug use in its naturalistic or community settings are still rather sparse, but growing. Early studies dealt mainly with alcohol or opiate use. During the 1970s the use of psychedelics became an object of study. In the last decade, especially under the influence of the HIV epidemic, the behaviors of injecting drug users (IDUs) have gained much attention.

Searching for recent studies that focus on the forms and meaning of drug use, that take the ritual experience as a starting point for analysis is a disappointing venture. Some authors refer to the notion of ritual in discussions on the (im)possibilities of behavioral change of IDUs under the menace of HIV infection. These analyses,

however, lack contents and are far from satisfactory. These studies will be examined in chapter seventeen. First, the few studies of ritualistic drug use in a modern, and secular context will be discussed. These studies were mainly conducted before 1980. The one extensive description of the intravenous drug administration ritual of urban American heroin addicts in the 1960s comes from Agar (44). He gives a detailed description of the objects (works), the ritual sequence and the resulting altered states of consciousness (rush, high, nod, and straight), and the significance for the performer. As a result from his inductive analytic approach Agar arrives at the following definition of ritual:

For an event to be a ritual event it must prescribe a sequence of psychomotor acts and this prescribed psychomotor sequence must be invested with a special meaning for the person performing that sequence.

Mainly because of its rigidly prescribed behavioral sequence, Agar interprets getting off (the intravenous self administration of e.g. heroin) as a ritual. And indeed, the drug administration sequence is a crucial point in this discussion. Its meanings and functions may vary for individuals.

Another work of great importance, is that of the recently deceased Zinberg and his colleagues. In their detailed study of, what they called, controlled and compulsive drug use they found that all drug users, to a certain extent, ritualize their intake of drugs, and that "controlled use is chiefly supported by emerging subcultural drug using rituals and social sanctions" (45). Although both rituals and social sanctions (rules) seem to be directed at controlling the process of drug use, they claim that, in effect, the rituals of controlled and compulsive drug users are very similar, but that particularly the different social sanctions that are adhered to, distinguish both user groups. It is thus important to differentiate the two terms clearly as "the distinction between drug-using rituals and social sanctions is one of behavior versus beliefs, or practice versus dogma" (46). Zinberg proposes the following definition of a drug ritual:

Ritual refers to the stylized, prescribed behavior surrounding the use of a drug. This behavior may include methods of procuring, and

administering the drug, selection of physical and social settings for use, activities after the drug has been administered, and methods of preventing untoward drug effects.

And social sanctions are defined as:

The norms regarding how or whether a particular drug should be used. Social sanction include both the informal and often unspoken values or rules of conduct shared by a group and the formal laws and policies regulating drug use.

Zinberg et al. favor the term social sanctions instead of rituals beliefs for two reasons. "First, the term emphasizes that beliefs are socially derived and reinforced. Second, social sanctions conveys more clearly than ritual beliefs the sense that behavior and belief are separable concepts" (46). They use both concepts in a very secular sense, stripped from every religious or sacred connotation. As discussed before, the distinction between sacred and secular and that between instrumental and symbolic have been important discussion points among students of ritual. Although its existence is often hard to ascertain, a preponderance of symbolic over technical action is required by most writers. Behavior that is solely technical or recreational is often not considered ritual (47). Zinberg and his associates take a much more liberal stand and, as they themselves explain, violate this tradition in two distinct ways. They apply these terms to drug use whether the goal of the user is recreation, improved mental or physical performance or religious experience. And, in their opinion, drug using rituals and social sanctions include both rational and non rational elements (46).

Agar contends that the distinction between sacred and secular is, in fact, a concept constructed by social scientists. He proposes "that whatever has special meaning for a group member counts as an instance of sacred ritual" (44). That way he seems to take an intermediate stand. His notion of special meaning leaves room for an in or out group perspective and intragroup variation regarding the perception of the ritual. For the one (an insider IDU) the ritual of getting off can be a sacred event and at the same time for an other IDU or an outsider a secular event. Cleckner regards repetitious behavior surrounding drug use only as ritual in a very general and secular

sense (20). She seeks support by Burroughs, the ultimate romanticizer of addiction and drugs, who wrote that "there is nothing sacred about heroin or indeed about street use of drugs in general" (48).

However, the matter is not that simple. Burroughs himself is rather ambivalent regarding the subject. In Naked Lunch he first writes "Junk is profane and quantitative like money" and denies the existence of opium cults, which is an inaccuracy. But a few pages later he writes "Junk is surrounded by magic and taboos, curses and amulets" (49). Cleckner sees thus little room for symbolic elaboration in shared street customs. In her view, these are predominantly pragmatic and rational. "Significant are the concrete results or effects of any action, not their reality status" (20). It may well be true that "A dope fiend can almost always give a practical explanation for anything he does" (20). But this does, of course, not exclude symbolic meanings. It merely means that, as Du Toit writes in his discussion on cannabis rituals in South Africa, "the ritual ... is not aimed at any agent, entity, or force. The satisfaction of the act is in its completion; it is an act which serves to give unity, identity, and transition to the participants, its value is in its performance" (26). Thus, drug use rituals are not focussed at sacred goals but at social goals and in that way they are not different from both the formal and natural rituals discussed before.

Conditions of Ritualization: Availability and Drug Use Rituals

Both historically and geographically, societies differ in respect to the drugs approved of, and those deemed unacceptable. There is no global agreement on which drugs are acceptable, and which are not. Nor has there been one, any given time. Furthermore, societies may change their opinions on certain drugs in time, and have, in fact, done so many times. At end of the 20th century, probably facilitated by modern communication technology, the use of drugs has become a issue of global discussion and concern. There are largely two competing, internally coherent perspectives on the use of drugs. These are a deterrence perspective and a normalization perspective (50). It can be ascertained, that from a global perspective, deterrence currently seems to be most appealing to mainstream society (the social group with the political and economic power to formally enact rules in law and with the control over a specialized body to enforce those rules (51)) and is thus applied in most efforts to control the use of drugs. The reactions of mainstream society towards drug use have, of course, important consequences for the nature of drug use and

drug problems. One of the most far-reaching reactions of mainstream society, has been to rule the use of certain drugs out of order by criminalizing these drugs and actively enforcing their prohibition. In this section the effect of the application of the deterrence perspective on ritualization processes around drug use is examined. The criminalization of use and possession of most drugs has profound effects on their availability in terms of price, quality and accessibility. Because of prohibition, drugs like heroin and cocaine are sold in closed illegal distribution networks, a black market without any quality controls (both on purity levels and the composition of the cuts) and with exorbitantly high prices. Price, quantity and quality clearly are strongly interrelated. It seems, however, that quality, and to a lesser degree quantity are more influenced by repression / criminalization than price. For example, although at very different levels, unit prices of heroin are rather stable in both Rotterdam (€15.- to €20.- for the smallest sales unit of \pm a tenth gram and €80.- to €110.- for a gram) and New York City (\$10.- for a bag, the street sales unit, containing \pm 20 to 30 milligram and \pm \$200.- for a gram). On the street level the sales unit is thus a price unit and not a quantity unit. In Rotterdam, South West Asian base heroin has been available since the early 1980s and the purity has been rather constant at \pm 40% (52, 53). The New York heroin market is dominated by South East Asian heroin. Although recent information points at a rising purity level, the general opinion of both New York users and researchers is that purity of street level heroin is generally low and variable. For a long time, it was a popular belief, both among researchers as among the lay audience, that in a heroin career the process of developing a physical dependence steadily and inevitably would lead to an increased intake of the drug and subsequently to injecting drug use. Yet, recent research found that this progression into more efficient or harder administration rituals generally results from actual or perceived economic pressure (54, 55, 56, 57, 58, 59). The onset and maintenance of injecting drug use is furthermore enhanced or prevented by specific socio-cultural factors such as, traditionally rooted drug administration rituals (60), cultural or religiously defined avoidances (e.g. needle taboos), (58) peer group pressure (54, 55), social learning and lifestyle related role model identification processes. Besides, many careers of heavy drug users are characterized by intense fluctuations in use level, influenced by availability of money and/or methadone; by detention; stress; guilt

feelings over ones level of use; periods of voluntary or mandatory moderation; or abstinence, to name a few (61).

In general, initial and early stage heroin users opt for routes other than injecting. In The Netherlands this mostly concerns smoking, with some exceptions of sniffing (62, 63). In New York sniffing is the most popular route of administration among novice heroin users, (54, 55) although recent reports also signal a growing number of new heroin smokers (64). Nevertheless, while in the U.S.A. the majority of heroin users eventually turn to injecting, the trend in The Netherlands is very clearly away from injecting (62, 63, 65). The recent reports on a shift away from injecting in New York seem, at this point, too preliminary to draw conclusions about a trend. Nevertheless, if the drug quality in New York really has risen to the reported levels, such a trend becomes well possible. From an AIDS prevention perspective this would be an encouraging phenomenon. On the other hand, many (long term) recreational heroin users in the U.S.A. also opt for injecting primarily due to economic considerations (poor drug quality) (45).

It is thus clear that different levels of drug availability are associated with different administration rituals. For a drug and the activities surrounding its administration to get ritualized, limited availability is an important condition, but in itself it is not a sufficient explanation. Combined with the recognized value the drug has for users, it is. The classical assumption of ritual value is that it attaches to objects that are socially important for secular reasons (36, 66) and that while economic value of objects depends on utility, ritual value is dependent on scarcity (36, 67). Thus, an object can only be socially important for secular reasons when:

- The objective importance of the object (the secular reason) is recognized by the individual members of the group and,
- This collective consciousness of objective importance is underlined by a limited availability of the object.

The limited availability becomes a constant reminder of the object's recognized objective importance, inducing a psycho-social process by which it gains a substantial subjective importance. While objective importance or utility is a sufficient condition for, and subjective importance may increase economic value, the latter is essential for ritual value. Scarcity not only increases the economic value of objects, it can also lead to the addition of symbolic elaboration (social importance). This creates

ritual value and, hence, the development of ritualization processes. Thus, when Durkheim writes that such "an object ... inspires respect when the representation expressing it in the mind is gifted with such a force that it automatically causes or inhibits actions, without regard for any consideration relative to their useful or injurious effects", (9) illegal drugs like heroin or cocaine make a convincing case. (italics in original) It can now also be concluded that the condition of special meaning in Agar's definition of ritual event has a double meaning, referring to instrumental and symbolic goals. The former refers thus to the (subjective) awareness of the objective importance of the act, which is the instrumental imperative (68) for its performance and the formation of the (sub)culture, centered around this act. The latter, induced by the integrative imperatives, inducing normatively regulated behavior aimed at the perpetuation of the culture, (68) is symbolic elaboration, thus added meaning (9). As an illustration, consider a substance of which the use is known to all --water. Water is an important, not to say, elemental object to all living species. In most Western industrialized societies the distribution of water is efficiently arranged. Elaborate and high technology transportation and filtering systems secure a sufficient availability of high quality drinking water and it is used generously. In principle you can get water when you need or want it. The availability is high. Although objectively water is of great importance to man's existence, this is taken for granted. Most people are not (subjectively) aware of the essential importance of water. They hardly (if ever) have experienced shortages or scarcity, it is not a matter of much consideration or thought. Now imagine any Sahel country, where the soil, because of all the cracks, has the appearance of a giant jigsaw puzzle. In this (not so imaginary) country it does not often rain and reliable water distribution networks are absent. Here, social and economic activity is often organized around the procurement of water. The few wells available are at considerable distance from each other and their level is carefully monitored. Frequently life is geographically organized at close distance to the wells. When travelling, the supply of water and the distance between the wells on the way are carefully taken into account when planning the journey. In agricultural efforts water is a constant source of concern. Living under such conditions, one is daily reminded of the importance of water. As Turnbull wrote, "... in this country a gift of water could be a gift of life" (69). It is, however, not only an objectively important substance, but also subjectively. This

consciousness determines and structures the daily activities to a great extent. In such regions water is a structurally, though often periodically, scarce object. Thus, the availability of water can be classified as low. It is therefore not surprising that in such regions one can find intricate calendrical or crisis rites of intensification (2) to secure a good rain season or to bring rain to end a drought, For example among the Mossi, a people living in Central and Eastern Burkina Faso, water has a special meaning. In the Western world water is not ritualized (maybe with some small exceptions among farmers to whom water may also be structurally scarce). When in western society water suddenly gets scarce, people do react, but not in a ritualized way (e.g. before the water tap is shut down, they fill a kettle or a bucket, or with media attention for tap water pollution people (temporarily) switch to bottled mineral water. In this context, sharing water is not an important or even meaningful action. In a sahel country sharing water is a very important and meaningful action.

The ritual value of objects is thus determined by the sentiments that they generate due to their scarcity. And indeed drugs, which have proven to be of great importance to man throughout the history (41), combined with their illegal status form a strong impetus for ritualization, as is documented in several studies (20, 44, 45). The term ritualization implies that ritual is not a static condition, but rather a gradual and dynamic process, correlating with availability. Ritualization may further vary with cultural conditions and idiosyncratic factors. As Agar argued, "for any ritual in some group, there will be intragroup variation in the extent to which the event is perceived as a ritual" (45).

The third aspect of availability is accessibility. Unlike alcohol, caffeine, nicotine and, in many cities in The Netherlands, cannabis, heroin and cocaine cannot be purchased in an ordinary outlet, due to their illicit and highly stigmatized status. When an individual wants to buy these drugs, he must turn to alternative sources --closed illegal distribution networks. These networks form the bottom of the trafficking pyramid and the drugs are generally sold by users to users --the difference between the dealer and user is ambiguous and protean. Due to their illegal status and the resulting police enforcement such drug user networks are not easily accessible, as their members are normally (necessarily) highly distrustful of strangers or outsiders and conceal their activities. It has been put forward that ritual interaction plays an important role in these networks to distinguish users from non users and prevent

police detection (70). These networks are furthermore unstable, both geographically and in time. In addition, the supply from higher echelons may stagnate. Hence, the individual needs up-to-date information on where the action is and the prevailing codes. This requires active and enduring participation in drug use defined networks. The enforcement of mainstream society's formal drug rules has thus acted as a strong impetus for the formation of a deviant subculture with specific codes and rituals around the transactions in, and use of drugs.

Conditions of Ritualization: Deviance, Subculture and Drug Use Rituals

Not only the formal, legally enacted, rules contribute to the formation of a subculture. Becker explained that informal agreements, "enforced by informal sanctions of various kinds" also fortify deviance. The construction of and attempts to enforce both formal and informal rules that define situations and their appropriate behavior are, according to Becker, a main characteristic of all social groups. They specify some actions as right or good and others as wrong or bad. Those that infract the rules are labeled as deviants or outsiders. However, deviance is not so much a trait or characteristic of the rule-breaker as he may be breaking a rule of one group, by obeying those of another. Also, the process of labeling is fallible; those who have been labeled deviant do not constitute a homogeneous category just because they have committed the same deviant act. Others may have committed the same act, but without notice and again others may not have committed the act, but be, wrongly, labeled as deviants. Thus, concludes Becker, "deviance is created by society; social groups create deviance by making the rules whose infraction constitutes deviance, and by applying those rules to particular people and labeling them as outsiders." Ergo, whether behaviors are deviant not only depends on the rules or laws but also on how people react to it or the enforcement of those rules. "Deviance is not a quality that lies in the behavior itself, but in the interaction between the person who commits an act and those who respond to it" (51). Once being labeled deviant with reference to a certain rule, "people [often] automatically assume that [a person] possesses other undesirable traits allegedly associated with it" (51). Public knowledge of (even single time) heroin use may label a person as a junkie, with the association of numerous other attributes, such as criminal, untrustworthy, dishonest, violent, etc.. Likewise, such identification overrules and prevents the identification of other, possibly more favorable, identifications. "The deviant identification becomes the

controlling one. Treating a person as though he were generally deviant rather than specifically deviant produces a self-fulfilling prophecy" (51).

Goffman pointed out that many of these processes are far more general and can be applied to all (groups of) people who possess an undesired differentness or depart negatively from the particular expectations of the, as he calls them, normals. Such a differentness, or stigma, "constitutes a special discrepancy between virtual and actual social identity" (71). Goffman distinguishes three different types of stigma -- physical deformities, blemishes of individual character, and tribal stigma (race, religion). In the second category mental disorders, imprisonment, addiction, alcoholism, homosexuality, unemployment, suicide attempts, and radical political behavior can all be found. The possession of a stigma can place the bearer in two different situations when interacting with normals. The stigma is either known or evident --as is the case with some physical deformities of tribal stigmas (such as race)--, or not. In the first case, Goffman speaks of the discredited, who have to manage tension while interacting with others. The latter is a discreditable. He is in a somewhat more favorable position, but in order to prevent detection, has to manage information on his stigma with great care. Both managing tension and passing are stressful activities (71). Drug users will find themselves often in either situation. The results of these processes will lead the person to actively involve in the subculture which has been formed around the stigma or deviant activity. In the previous sections the human need/drive for solidarity was discussed. Humans want to belong to a group. A stigma or deviant label thwarts participation in other more conventional roles or groups and progressively changes the lay out of day-to-day life considerably (72). Such processes can clearly be witnessed in the case of heroin users: losing ones job or being thrown out of the house upon discovery of (even single time) use, imprisonment, the daily routine of the methadone program, etc. Being denied satisfactory participation in other groups limits ones choices and is, therefore, another reason for participation in the subculture. Once the step into active participation in the subculture has been made, a person soon finds out that this has distinctive advantages. Among his own "he can withdraw for moral support and for the comfort of feeling at home, at ease, accepted as a person who really is like any other person" (71); feelings that are otherwise denied. "It gives them a sense of common fate, of being in the same boat", (51) where he can talk freely with people

who, because they are in the same position, will generally understand, if not agree, about all the subjects related to the particular stigma. In the subculture people meet who "Knowing from their own experience what it is like to have this particular stigma, ... can provide the individual with instruction in the tricks of the trade", (71) so that "he learns how to carry on his deviant activity with a minimum of trouble. Every deviant group has a great stock of lore on such subjects and the new recruit learns it quickly" (51).

The deviant group has furthermore a common set of norms and values that function as a self-justifying rationale that counters conventional doubts and provides seemingly consistent reasons for the deviant practice (51). These norms are often said to differ from those in mainstream culture. Sometimes they are worked out into full-fledged ideologies and in some cases these claim that the deviant is not only equal to the non-deviants but superior (71). The most explicit examples of this can be found in the gay and lesbian subcultures in which ideologies range from apologetic to militant separatism. The use of psychedelics in the 1960s and 1970s was sometimes promoted as mind expansion and a means of becoming a better person. Nevertheless, regarding drug users, the question can be put forward how far their norms and values actually differ from those in mainstream culture as their secondary deviance, (73) including the deviant norms and values, may purely be a consequence of the attached label. Such differences are surely not absolute and subject to individual variation.

It is evident that a deviant subculture unites individuals that share a common fate, having to deal with common problems. It offers a "set of perspectives and understandings about what the world is like and how to deal with it, and a set of routine activities based on those perspectives" (51). When these routine activities are addressed as rituals the connection with Durkheim's concept of religion becomes clear, as he defined the latter as "an unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden - -beliefs and practices which unite one single moral community called a church, all those who adhere to them" (9). The comparison between a religious community in the Durkheimian sense and the drug subculture can now be made. The contemporary conditions under which its devotees have to practice their creed, bears, especially in countries with a War on Drugs or Zero Tolerance policy, a remarkable analogy with those of the

European reformatists under the inquisition in the Middle Ages. Under such circumstances "Life ... oscillates between states of extreme mental dejection and extreme mental joy. Crises, calamities and disappointments of numerous sorts which are ever occurring ... tend to disrupt the normal functioning of life and create a veritable condition of social dysphoria. Rituals on such occasions serve to counterbalance the disturbing actions of these adverse circumstances and restore social euphoria" (8).

While this comparison is somewhat metaphorical, it illustrates the general mechanism at work. The more a deviant group (deviant from the dominant behavior, norms and values) is set apart and put under pressure, the more it will profile itself as a deviant group. The more stereotypical deviant behavior, norms and values will then get emphasized and reinforced, resulting in a highly separated, intra-dependent, monofocussed subculture, which members are very distrustful towards mainstream culture. This implies again that ritualization is a process, subject to the reactions of the mainstream culture.

References

1. Christensen W: A fashion for ecstasy: ancient Maya body modifications. In: Vale V & Juno A (eds.): Modern Primitives: An investigation of contemporary adornment and ritual, Re/search #12. San Francisco: Re/search Publications, 1989: 79-91.
2. Wallace AFC: Religion: An anthropological view. New York: Random House, 1966.
3. Goffman E: Interaction ritual: Essays on face to face behavior. New York, Pantheon Books, 1967.
4. Goody E: Greeting, begging and the presentation of respect. In: La Fontaine JS (ed.): The interpretation of ritual. London: Tavistock, 1972.
5. Weil A, Rosen W: Chocolate to morphine: Understanding mind-active drugs. Boston: Houghton Mifflin, 1983.
6. Grund J-PC: Over de definieëring van het begrip verslaving. Rotterdam: IPSP, Erasmus University Rotterdam, 1984.
7. Drever J: A dictionary of Psychology. Harmondsworth, Middlesex: Penguin Books, 1976.
8. Nagendra SP: The concept of ritual in modern sociological theory. New Delhi: The academic journals of India, 1971.
9. Durkheim E: The elementary forms of the religious life. London: George Allen & Unwin LTD, 1971.
10. Goody J: Religion and ritual: the definitional problem. British Journal of Sociology 1961; 12(2):159.
11. Carter WE: The Aymara, and the role of alcohol in human society. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 101-110.

12. Partridge WL: Transformation and redundancy in ritual: a case from Colombia. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 59-74.
13. Nadel SF: Nupe religion. London: Routledge and Kegan Paul, 1954.
14. Turner VW: Symbols in African ritual. Science, 1973; 179(4078): 1.
15. Malinowski B: Magic, science and religion and other essays. Glencoe Ill.: The free press of Glencoe, 1948.
16. La Fontaine JS (ed.): The interpretation of ritual. London: Tavistock, 1972.
17. Leach ER: Ritual. In: Sills DL (ed.): International Encyclopedia of the Social Sciences. New York: The Macmillan Company & The Free Press, 1968; 13: 520-526.
18. Radcliffe-Brown AR: Structure and function in primitive society. London: Cohen and West LTD, 1952.
19. La Fontaine JS: Ritualization of women's life crisis in Bugisu. In: La Fontaine JS (ed.): The interpretation of ritual. London: Tavistock, 1972.
20. Cleckner PJ: Cognitive and ritual aspects of drug use among young black urban males. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 149-168.
21. Gennep A van: The rites of passage. London: Routledge and Kegan Paul LTD, 1960.
22. Chapple ED, & Coon CS: Principles of anthropology. New York: Holt, 1942.
23. Goffman E: Interaction ritual: Essays on face to face behavior. New York, Pantheon Books, 1967.
24. Goffman E: Gender advertisements. New York: Harper and Row Publishers, 1976.
25. Collins R: Towards a neo-Meadian sociology of mind. Symbolic Interaction 1989; 12(1): 1-32.
26. Du Toit BM: Ethnicity and patterning in South African drug use. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 75-100.
27. Portman A: Animals as social beings. New York: Viking Press, 1961.
28. Goldenweiser AA: Review les formes élémentaires de la vie religieuse. American Anthropologist 1915; 17: 719-735.
29. Wilson M: Nyakyusa ritual and symbolism. American Anthropologist, 1954; 56(2): 241.
30. Leach ER: Ritualization in man: ritualization in man in relation to conceptual and social development. In: Huxley J (ed.): Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences, 1966; 251: 403-408.
31. Guanon R: Introduction to the study of Hindu doctrines. London: Luzac and Co., 1945.
32. Firth R: Verbal and bodily rituals of greeting and parting. In: La Fontaine JS (ed.): The interpretation of ritual. London: Tavistock, 1972.
33. Turner VW: Dramas, fields and metaphors. London: Cornell University Press, 1974.
34. Moore SF & Myerhoff BG: Secular ritual. Assen/Amsterdam: Van Gorcum, 1977.
35. Morris D: Foreword. In: Morris D and Marsh P: Tribes. London: Pyramid Books, 1988: 6-8.
36. Radcliffe-Brown AR: The Andaman Islanders. Glencoe Ill.: The free press of Glencoe, 1948.
37. Durkheim E: The division of labor in society. New York: The Free Press, 1964.
38. Morris D and Marsh P: Tribes. London: Pyramid Books, 1988 (cover).
39. Bourguignon E: Altered states of consciousness, myths and rituals. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 7-24.

40. Aaronson B, Osmond H: Psychedelics. The uses and implications of hallucinogenic drugs. Cambridge: Schenkman Publishing, 1971.
41. Siegel RK: Intoxication: life in pursuit of artificial paradise. New York: Pocket books, 1990.
42. Botje H: Qat kauwen is serieuze zaak in Jemen. NRC-Handelsblad 01-26-1988.
43. Henman AR: Mama Coca. Bogotá: El Ancora/La Oveja Negra, 1981.
44. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 137-148.
45. Zinberg NE: Drug, set, and setting: The basis for controlled intoxicant use. New Haven: Yale University Press, 1984.
46. Harding WM, Zinberg NE: The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 111-134.
47. Gluckman M: Les rites de passage. In: Gluckman M (ed.): Essays on the ritual of social relations. Manchester: Manchester University Press, 1972: 1-52.
48. Burroughs WS: Junkie. New York: Ace books.
49. Burroughs WS: Naked Lunch. Secaucus, NJ: Castle Books, 1959.
50. Wijngaart GF: Competing perspectives on drug use: The Dutch experience. Amsterdam/Lisse: Swets and Seitzinger, 1991.
51. Becker HS: Outsiders: Studies in the sociology of deviance. New York: The Free Press, 1973.
52. Huizer H: Analytical studies on illicit heroin, chapter XI The illicit heroin market. PhD dissertation. Rijswijk The Netherlands: Forensic science laboratory, 1988: 151-164.
53. Huizer H: Samenstelling en kwaliteit van illegale heroïne in Nederland: Een globaal overzicht over de periode 1970-1989, en een verslag over 1990. TADP 1992; 18(1): 1-12.
54. Des Jarlais DC, Friedman SR, Casriel C, & Kott A: AIDS and preventing initiation into intravenous (IV) drug use. Psychology and Health 1987; 1: 179-194.
55. Casriel C, Rockwell R, Stepherson B: Heroin sniffers: between two worlds. J Psychoactive Drugs 1988;20(4): 37-40.
56. Power RM: The influence of AIDS upon patterns of intravenous Use- Syringe and Needle Sharing- among illicit drug users in Britain. In: Battjes RJ, Pickins RW (eds): Needle sharing among intravenous drug abusers: National and international perspectives. Rockville: NIDA, 1988: 75-88.
57. Parker H, Bakx K & Newcombe R.: Living with heroin: The impact of a drugs 'epidemic' on an English Community. Philadelphia: Open University Press, Milton Keynes, 1988.
58. Kaplan CD, Janse HJ & Thuyns H: Heroin smoking in the Netherlands, In: Drug abuse trends and research issues, Community Epidemiology Work Group Proceedings. Rockville: NIDA, 1986: III-35-45.
59. Burt J & Stimson GV: Report of in-depth survey of intravenous drug use in Brighton. London: Monitoring Research Group, 1988.
60. Pearson G, Gilman M, McIver S: Young people and heroin. Aldershot: Gower, 1987.
61. Bennett T, Wright R: The drug-taking careers of opioid users. The Howard Journal of Criminal Justice 1986; 25(1): 1-12.
62. Korf DJ, Hogenhout HPH: Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drughulpverlening. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.

63. Korf DJ, Aalderen H van, Hogenhout HPH, Sandwijk JP: Gooise Geneugten: Legaal en illegaal drugsgebruik (in de regio). Amsterdam: SPCP Amsterdam, 1990.
64. Frank B, Galea J, Simeone R: Drug use trends in New York City December 1990. New York, New York: New York State Division of Substance Abuse Services, 1990.
65. Buning EC: De GG & GD en het drugprobleem in cijfers, deel IV. Amsterdam: GG & GD 1990.
66. Harrison JE: Ancient art and ritual. New york: Oxford University press, 1951.
67. Malinowski B: Sex, culture and myth. New York: Harcourt, 1962.
68. Malinowski B: A scientific theory of culture and other essays. New York: Oxford University Press, 1960.
69. Turnbull CM: The mountain people. New York: Simon & Schuster, 1987.
70. Carlson KA: Identifying the stranger: An analysis of behavioral rules for sales of heroin. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 191-206.
71. Goffman E: Stigma: Notes on the management of spoiled identity. New York: Simon and Schuster, Inc., 1963.
72. Soloway I, Walters J: Workin' the corner. The ethics and legality of ethnographic fieldwork among active heroin addicts. In: Weppner RS (ed.) Street Ethnography. London: Sage Publications, 1977: 159-178.
73. Scheff T: Being mentally ill: A sociological theory. Weidenfeld and Nicholson, 1966.

DESCRIPTION OF THE STUDY

Contents

Definition of Terms

Research Questions

Methodology

Characteristics of Research Participants

Representativeness

References

In this chapter the terms used in this thesis are defined and the research questions and hypotheses presented. Ensuing, the methodology of the ethnographic study is discussed and some characteristics of the study participants are described. Most of this thesis is based on this empirical study. Where additional material or data sources are used these are described.

Definition of Terms

Chapter 2. established that all definitions of ritual shared some condition of form. Ritual behavior should be either stylized, stereotyped, determined, standardized, repetitive, reassertive, or exhibit striking or incongruous rigidity --different terms for the same requirement. Uncertainty about the direct aim of the behavioral sequence of acts and signals is not allowed. It may not convey new information, it is fixed, prescribed and directed at creating a common emotion. Opinions diverge regarding the object of the ritual action. Some authors put an emphasis on the sacred character of the acts, others do not. Be it sacred or secular, the event should, however, have some symbolic meaning. This characteristic must have a preponderance over the technical purposiveness. This formulation leaves room for individual differences in the perception of the symbolic value of the actions. Thus, when Zinberg et al. found that rituals do not distinguish between, the individuals they classified compulsive or controlled drug users (1), this can also be applied to the formal religious rituals of any church. Church rituals do not distinguish the deep religious devotees from the opportunistic non-believer who visits church to meet with social expectations or control.

Zinberg's definition is largely focussed on the process of drug administration. Using it strictly may lead to some omissions in the analysis of ritual behavior of drug users. For this reason Agar's definition seems the most suitable and, therefore, it is used in this study.

Definition of a Ritual Event

For an event to be a ritual event it must prescribe a sequence of psychomotor acts and this prescribed psychomotor sequence must be invested with a special meaning for the person performing that sequence (2).

Besides rituals, drug users share a specific set of rules or norms regulating the use of drugs and group interactions. Zinberg distinguished two kinds of norms or social sanctions; formal ones --those enacted in laws and policies-- and informal ones --those developed in the drug using peer group. Both drug taking rituals and informal social sanctions regarding drug use provide the user with "instruction in, and reinforcement for maintaining patterns of illicit drug use which do not interfere with ordinary functioning and methods for use which minimize untoward drug effects" (3). Formal social norms regarding drug use, i.e. the drug laws, do no such thing. They merely prohibit drug use. Consequently, they are de facto broken by all users of illicit drugs. For recreational drug users, who may be more eager to adhere to the formal laws, this may be a source of stress. However, heavy or regular drug users break the formal norms regarding drug use on a regular basis and therefore these laws seem to have lost much of their deterrent power. The worries of heavy drug users do not so much concern the actual breaking of the formal norms, but rather staying a few steps ahead of the enforcers of the norms.

Formal norms may have some influence on whether or not people start using illicit drugs, but do not have a regulating effect on the actual use of drugs, as they do not provide instructions or rules for safe or controlled use. Such a situation does not foster and reinforce the development of socially accepted models of controlled drug use. As a consequence, norms of controlled use have been developed by users themselves through interaction and diffusion processes in, and between social groups, intrinsic to the practice of social drug use. Formal rules regarding illicit drug

use not only fail to reinforce safe use, their active enforcement even obstructs the development and communication of safe standards to a large extent. As a result, both rituals and informal norms surrounding the use of illicit drugs can be seen to possess idiosyncratic features (1).

Zinberg et al. found that in their study, in contrast with rituals, social sanctions differentiated controlled users from the compulsive ones (1). Control, however, is a relative notion. Many careers of heavy drug users are characterized by alternating periods of abstinence, controlled and uncontrolled use (4). Thus, it is here hypothesized that social sanctions aimed at control and reduction of harm are also expected among drug users, whose drug use, according to certain standards (e.g. those applied by Zinberg), may be called uncontrolled. Determination of such categories as controlled v.s. compulsive use, or e.g. recreational v.s. addicted use is, however, hampered by huge definitional problems. This problem will be discussed at the end of this section. Furthermore, norms "identify behavior that ought or ought not to occur, [and therefore] behavior may (and often does) depart from norms" (5). As his main study theme was the distinction between controlled and compulsive users of illicit drugs, Zinberg's definition of norm or social sanction (the norms regarding how or whether a particular drug should be used) centers strongly around the actual intake of the drugs. The norms found in the drug subculture are, of course, often centered around drugs, the object of common interest. However, his definition may lead to omission of other important social rules prevalent in the drug subculture. A more general definition of norm or rule is expedient; one that includes both the rules directly tied to the intake of drugs, and those that deal with other situations that occur in the drug subculture. Becker's definition covers these requirements:

Definition of Social Rules

Social rules define situations and the kinds of behavior appropriate to them, specifying some actions as right and forbidding others as wrong (6).

Chapter 2.3.3 extensively discussed the influence of the restricted availability of drugs on their potential to become an object of ritualization. At this point this property will be defined.

Definition of a Ritual Object

In order for an object to get ritualized, that is, obtain ritual value, it must be of substantial subjective importance (special meaning) to the persons involved, and be structurally scarce, that is, have a low availability.

The term drug availability is rather complicated to define, because it is dependent on several variables, functioning at different levels. A certain commodity can be highly attainable, but have a price so high that only few can afford it. Therefore, a definition of drug availability must take into account not only the actual presence of the product, but also its price level (as e.g. influenced by restrictive measures of the enforcers of the drug laws) related to the financial position of the user, which, for example, depends on the "possession of the conventional and/or criminal skills to provide money to purchase [drugs]" (7). The User's financial position in relation to the drug is, however, not only dependent on her/his income (and, of course, other expenses), but also on her/his tolerance and/or craving. This, in turn, brings up the pharmacological properties of the drug. Although equally available, heroin availability may be perceived completely different than cocaine availability, depending on preference or, more significantly, use level. Still, there is more at issue. Access to illicit drugs requires knowledge of, mostly surreptitious vending sites and the skills to distinguish a good deal from bogus drugs. This routinely leads to active participation in drug use / dealing networks or dependence on other drug users. Finally, the user must have the skills to actually use the drug. For example, a substantial number of female injecting drug users (IDUs) lack this skill and are consequently dependent on their male partner to get off (8). "In short, availability is a product of all those opportunities and obstacles that may influence a ... user's prospect for ultimately introducing a quantity of the drug into his or her [system] (7). It is thus clear that availability is highly variable, depending on many factors that may differ with individuals and situations. In this study the perception and experience of the users is of main importance, as this ultimately has consequences for the level of ritualization. For that reason, the definition utilized must include the perception of the users.

Definition of Perceived Drug Availability

Perceived drug availability refers to the efforts a user must go through in order to procure the desired drug, as assessed by the user. It includes general aspects, such as price and quality, and personal aspects, such as financial position and money making skills, knowledge of drug distribution networks, drug taking skills and drug of choice.

Throughout this thesis the research participants are addressed as drug users or users, sometimes as recreational or, in contrast, as heavy or regular users. Likewise, their use of intoxicating substances is referred to as (heavy) use. Terms such as addict, junkie, abuse, misuse, (physical and/or psychological) dependence and addiction are, as much as possible, avoided. This choice is grounded in both pragmatic and conceptual reasons.

To start with the latter, although efforts to formulate appropriate terms, definitions and concepts are undertaken for decades, in particularly by successive WHO Expert Committees on Drug Dependence (9), consensus on nomenclature remains absent in the scientific community, in particular in the medical and social sciences. In 1984 the author conducted a literature review into the definitions of the addiction concept. The main conclusions of this study are here summarized.

The development of the addiction concept (and related concepts) has been severely influenced by moral, political and legal forces. These concepts and the resulting definitions are furthermore developed based on experiences with non-random samples, generally in treatment settings. In practice, the developed terminology (abuse, misuse, addiction, dependence, etc.) is hardly workable. A scientifically sound distinction of these terms is absent. The majority of the reviewed literature did not define the terminology used. This is a major shortcoming, in particular because in many of the reviewed literature, some theory regarding addiction was presented. The definitions encountered in the review were in majority so dissimilar, that it is impossible to speak of, even a semblance of scientific agreement (10).

A major shortcoming of the efforts to produce a definition of, for example, addiction or drug abuse is not only that already in the word choice a (linguistic) value judgment is

apparent, but even more, such concepts are often presented as isolated notions, without acknowledging the inevitable "central cultural conceptions of motivation and behavior" (11) akin to, and variable with, every culture. As Cohen formulated it recently: "[The medical and social] sciences seem to be unable to describe and explain the phenomenon of drug use without an unusually strong bias. This bias is produced by a cultural dependency on concepts of much larger significance than drug use itself" (12). The first efforts to formulate a nomenclature (and theories) on the phenomenon of drug use date from the late nineteenth century; a period in which the booming medical and psychiatric disciplines were poignantly influenced by the temperance and anti-opium movements. As Berridge writes: "In many respects the apparent scientific progress represented by their elaboration marked only the reformation of moral reactions to opiate use in a changed setting. Moral views were given scientific respectability through their propagation by medical specialists. Doctors were reformulating and presenting old moral concepts in an area where, as examination of treatment methods very clearly shows, they had little to offer" (13). Current thinking about and concepts of drug use are thus largely rooted in reformulated moral concepts. This led Szasz to question and ultimately deny the legitimacy of the (psychiatric) notion of addiction. He argues that addiction and related dogma's have never been questioned and are based on acceptance of conventional (moral) definitions of certain behaviors and circular reasoning in constructing a pseudo-scientific explanation, justifying the moral choice. Without repudiating the possible negative aspects of drug use he writes: "[T]he difference between someone using a drug and his being addicted to it is not a matter of fact, but a matter of our moral attitude and political strategy toward him" (14). In this line of thinking one can easily substitute drug use for other behavioral expressions, not sanctioned by mainstream culture (those in power), such as non-chemically induced altered states of consciousness (madness), homosexuality, masturbation and other forms of divergent sexuality, abortion and even various forms of criminality. It is therefore not surprising that in late nineteenth century similar disease views emerged on e.g. madness, alcoholism and homosexuality (13). Such a comparison illustrates the relative status of these concepts, as it is clear that the values, and thus the definitions connected with them, are subject to change, both geographically and over time. It is thus clear that, although current definitions are often presented as such, it

is not possible to formulate objective definitions of the social phenomena such as the above. This led Cohen to call the complex of activities and realities around the phenomenon of drug use social constructions (12). For further information on the theoretical aspects of this discussion (such as e.g. the power aspects) the reader is referred to the writings of, among others, Szasz (14, 15) and Peele (11).

Besides these conceptual considerations, there is a strong pragmatic argument for the above choice, largely determined by the design of the study (discussed in depth in section 3.3). The most important mode of data collection has been participant observation. Drug users were observed using drugs in their own territoria, mainly at so called house addresses where heroin and cocaine are sold and used. How can this group be characterized? Are they abusers, uncontrolled or compulsive users, problematic users of the drugs they consume? Are they addicted? The people frequenting these places are mostly involved in drug use on a daily basis, but this does not count for all visitors. Therefore, these labels cannot be attached.

Since some years now, one can observe a -scientifically correct-- trend away from the term addicts, substituting it for drug users or merely users (16). Recent Dutch interview studies have utilized more objective and quantifiable inclusion criteria based on the frequency of opiate use (e.g. a regular opiate user defined as a person who uses opiates at least four days a week or a daily user defined as a person who uses opiates each day or almost each day (five to six days a week)) (16, 17). In the participant observation approach utilized in this study it was not possible to assess data on frequency of use. This would have severely affected the principal non-intrusive character of the methodology. But, more important, there was no need for such criteria, as the main interest of the project was to study the actual drug self-administration rituals surrounding the use of heroin and cocaine. As the studies of Zinberg determined, the rituals do not distinguish between user groups --the actual behavioral sequence is in essence the same.

Research Questions

This dissertation presents the results of an explorative ethnographic field research into the drug taking behaviors of regular users of heroin and cocaine in Rotterdam, The Netherlands. For this purpose the study used the concept of ritual. This concept has been utilized in a large number of classic cultural anthropological studies and, in

a somewhat lesser extent, in sociological studies. Its explicit application in studies of illicit drug use, however, is limited to a few, though very interesting, ones. As a consequence, this study started with rather general research questions, resulting in an open focus ethnographic approach. Its major aim was to generate knowledge and hypotheses about the ritualized behaviors surrounding the intake of heroin and cocaine; about the patterns, meanings, functions, and possible health implications of these rituals, grounded in the descriptions of the everyday behaviors of active users. The research questions of this dissertation can be grouped in the following clusters:

1. *Patterns, Function and Meaning of Drug Administration Rituals*

1.1 What ritualized behavior patterns can be distinguished surrounding the self-administration of heroin and cocaine?

1.2 Which factors determine the choice for a certain drug administration ritual (smoking or injecting), and how stable are these rituals?

1.3 To what extent can the recurrent sharing of drugs be considered a ritualized interaction?

1.4 What drug use related social rules can be distinguished in relation to the observed ritualized behaviors?

1.5 What are the functions and meanings of these rituals and rules, for the individual as well as for the community of drug users?

1.6 Are there differences between the two subpopulations (smokers and IDUs)?

1.7 To what extent do drug use related rituals and rules contribute to self-regulation of drug use and to the reduction of drug use related harm?

1.8 What other determinants of drug use self-regulation processes can be distinguished and how do these interact with rituals and rules?

1.9 What external factors influence the efficacy of these self-regulation processes?

2. *Drug Administration Rituals and Health*

2.1 What are the (physical) health consequences of the distinguished drug administration rituals?

2.2 Can the drug sharing patterns of IDUs put them at risk for contracting or transmitting HIV and other microbiological infections?

2.3 Under which conditions does needle sharing occur?

2.4 Is the sharing of needles a distinct ritualized interaction pattern?

3. *Drug Administration Rituals, Drug Policy and Interventions*

3.1 What are the effects of different drug policy options on the ritualization processes surrounding the use of illicit drugs?

3.2 How can the findings of this study be used (i) in the promotion of safer and more controlled patterns of intoxicant use and (ii) to reduce the with drug use associated hazards and harm, for example HIV infection?

3.3 What are the implications of the study for future research, drug policy, and the provision of drug treatment and care?

Methodology

Introduction

Discussions on the value of quantitative and qualitative research designs and techniques have a lengthy tradition in the social scientific literature.

Quantitatively oriented researchers often question the generalizability of qualitative data. Ethnographers themselves have also discussed the intellectual legitimacy of their methodologies (18). Qualitative researchers have expressed doubts about the validity of quantitative instruments and the interpretation of numeric data. Both methodologies have strong and weak points and they often describe different aspects of the same social world. Of

importance and seemingly rather obvious, is that the specific research question should determine the methodological approach. Some research questions require a quantitative design, for example, when researching known populations and when dealing with phenomena about which already some scientific knowledge exists. For the research questions posed in this thesis, in an area where little scientific knowledge exists, an explorative, and primarily qualitative design is suitable. As Lambert and Wiebel stated:

"[e]thnographic research methods are appropriate for topics about which little is known, primarily because ethnography is by its nature fundamental and exploratory, preparing the way for more rigorous studies that strive for precision and quantification. ... Ethnography serve[s] to fill knowledge gaps and set[s] the groundwork for further scientific inquiry. ... It is at this exploratory, descriptive stage of research that ethnographic and qualitative methods can make significant contributions to the knowledge and understanding of problems and to the formulation of subsequent questions for quantitative research, including clinical studies, laboratory experiments, and population-based surveys" (19).

Working with unknown or hidden populations makes it nearly impossible to use standard random sampling techniques. As Wiebel writes:

"Because the use of illicit intoxicants is largely a covert activity in our society, it is not possible to enumerate all individuals who engage in such behaviors. Representative sampling, irrespective of scientific merit, is quite simply not possible in relation to the numerous varieties of phenomena at issue (20)".

Moreover, data collected by self-report techniques may often be highly biased if they reflect socially undesirable and criminalized activities. Ethnographic field observations can provide an opportunity to overcome the potential disadvantages of questionnaires or interviews by directly recording behaviors.

Biases of memory, self perception, fear and mistrust are traversed. Nevertheless, ethnography has its own limitations. As previously noted, the validity and generalizability of findings have been questioned (21). The researchers presence might alter the context and behaviors of the study group. However, the collective experience of the ethnography of socially undesirable behaviors has indicated that with due care and time the researcher can become part of the furniture (13). Group members live within well- established traditions that constrain their actions. While the presence of the researcher may introduce a new constraint, the weight of traditional constraints routinely prevails (22). The validity of ethnographic data can be further improved through appropriate controls on site and subject selection, development of trust, observational strategies and protocols of data recording (23).

The data for this research were mainly collected between February 1988 and May 1989, while some additional observations were recorded between May 1989 and December 1991. The principal methodology can best be described as open focus street ethnography. Intensive participant observation was conducted of drug users' self-administration of heroin and cocaine at dealing places, their homes, and public places in two neighborhoods of Rotterdam characterized by high concentrations of drug activity. This open focus ethnography permitted the research team to see things they were not looking for. The discovery of frontloading provides an excellent example of the scientific value of such serendipity. In 1754, Horace Walpole first coined the term serendipity. The term was first printed in 1833 when a collection of Walpole's letters were published. Walpole introduced the term as follows: (24)

"This discovery, indeed, is almost of that kind which I call Serendipity, a very expressive word, which, as I have nothing better to tell you, I shall endeavour to explain to you: you will understand it better by the derivation than by the definition. I once read a silly fairy tale, called "The Three Princes of Serendip:" as their Highnesses travelled, they were always making discoveries, by accident and sagacity, of things they

were not in quest of: for instance, one of them discovered that a mule blind of the right eye had travelled the same road lately, because the grass was eaten only on the left side, where it was worse than on the right --now do you understand Serendipity?" (25).

Fleming's discovery of the antibiotic activity of the penicillium fungus in 1928 is perhaps the most famous example of serendipity.

The serendipitous discovery of frontloading strongly influenced the further development of the research project and the theoretical analysis of the data. Empirical facts help with starting a theory, as Merton in 1957 remarked: "The serendipity pattern concerns the rather common experience of observing an unanticipated, abnormal and strategic fact that becomes the reason for the development of a new theory or for the extension of an existing theory" (26). The discovery of frontloading and the realization of its potential significance served as the stimulation to further scrutinize the phenomenon and place it in a wider frame of knowledge. Evidently, this has resulted in some diversion from the ideas in the original research proposal, but "[t]he development of science cannot be straightjacketed. The most interesting discoveries [are found] outside of the vested structures" (24).

Research Sites

In order to study drug users, one first has to make contacts with them. Most studies of compulsive drug users have been carried out in treatment settings such as methadone programs, residential therapeutic communities, clinics or other institutional settings such as prisons. When one wants to study drug users and their behaviors in their natural setting these locations are not suitable. In some instances, they can be used as a starting point to make contacts with users that are willing to take the researcher to natural congregation sites, such as copping (buying) zones, house addresses or shooting galleries. That was not the case in this study. Rotterdam is a city with approximately 580.000 residents. The number of heroin users is estimated

between 2500 and 3500 (27, 28). Although, drug users are not confined to a particular part of the city and in many neighborhoods drugs such as heroin and cocaine can be bought, there are a few areas with heightened drug activity. As a result of prior experience in the Rotterdam drug field, these areas were identified beforehand. Two strategic research sites (29) were selected because they represented significant variations in the areas of high concentration drug activity.

The first research site was the zone around the Rotterdam Central Railway Station and the adjacent neighborhood. The Central Station served as a meeting place for heavy drug users, alcoholics and other marginals since the middle of the 1970s. It is the only remaining open drug scene in Rotterdam and the center of the street dealing of methadone (especially on Fridays when methadone program clients get their take home doses for the weekend) and prescription drugs, such as the popular benzodiazepine Rohypnol. Some small scale street dealing of heroin and cocaine also occurs in this area. Because of factors relating to both the drug packaging (in contrast with drugs sold at house addresses, the drugs sold in this open scene are prepackaged) and the rushed atmosphere of a street drug sale, the consumer has much less control over the purchased product. According to well informed users, who have access to house addresses, heroin and cocaine bought at the Central Station are the worst buys in the city. Many users at the Central Station do not have access to or knowledge of house addresses, the most common setting for drug dealing in Rotterdam. Some users are temporarily denied entry to house addresses if they do not buy or are known to be in financial need. Other users are denied access more permanently. This is usually because their behavior and reputation does not conform to subcultural expectations. Among the permanently barred users, the most marginalized ones can be found. The other group using the Central Station market consists of drugs tourists. Korf et al. studied heroin tourists in Amsterdam, a city with an international reputation for drugs tourism. They found that most of their subjects (N= 382) came from Germany (35%), Italy (21%), the United Kingdom (10%) and Spain (7%). To their surprise, they only found a small percentage of French (3%) and Belgian

(2%) heroin users, comparable with the percentage of North Americans (2%) (30, 31). In contrast, in Rotterdam, although no systematic research has been undertaken, it seems that the majority of drug tourists come from France and Belgium. They are mostly serviced by (both drug using and non using) French speaking Moroccans, who either sell them small quantities or guide them to house addresses, when larger quantities are desired (32). Few drug tourists have steady contacts outside the Central Station themselves.

At one side of the Central Station, throughout the day several low-threshold mobile methadone maintenance programs (modified city transport busses) dispense methadone to their clients. At the other side stands a small portable shelter where the, often homeless, visitors of the station can drink a cup of coffee or have a first contact with a social worker. In this shelter syringes are dispensed.

The neighborhood adjacent to the Central Station has a long history of drug use and dealing. In the late 1970s the main street of this neighborhood provided a dense and large street coping area. In the early 1980s the police cracked down on this overt drug scene with the result that drug dealing spread over the older neighborhoods of town undergoing renovation. However there is still drug dealing in the neighborhood mainly indoors. Also in this neighborhood is a church, that runs a day shelter. This shelter is visited by people with drug, alcohol, housing and other problems. It offers such services as sanctuary, a cheap meal and initial help with social problems. Many steady visitors of the Central Station frequent the church shelter.

The second research site is one of Rotterdam's oldest neighborhoods. Close to the center of town, the first building of this neighborhood stems from 1725. Hundred and fifty years later the neighborhood grew rapidly as a working class residential area due to an agricultural crisis and the rise of industrial and harbour activities in Rotterdam. Houses were cheap and the area became densely populated. Families lived from generation to generation in the neighborhood, often in the same street and houses. The neighborhood knew an intense social and corporate life for decades, e.g. many streets had their

own social club. However, in the twentieth century, especially after the second world war, the quality of the housing rapidly deteriorated. In the 1960s and early 1970s many inhabitants who were in a position to leave, did so and they were succeeded by foreign laborers, students and squatters. Social life and relations drastically changed. In the Seventies the urban renewal began in the area. Although this improved the housing situation, it also meant an additional burden on the already weakened social structure (33).

In 1982 it became apparent that the use of hard drugs among neighborhood youth had risen rapidly and due to the above mentioned police activity in the original drug area of the Central Station, drug dealing entered the neighborhood and quickly multiplied. In some streets under renovation more than 10 dealing places could be identified and the police estimated that the total number of dealing and using places in the neighborhood was around 80. In 1982 the total number of heroin users living in the neighborhood was estimated at ± 250 (33). At the end of the 1980s the neighborhood began recovering from the urban renewal process, which was near completion. Although drug activities have decreased to a certain extent, there is a stable group of drug users living in the neighborhood. Many of them were raised in the neighborhood. Besides this group another, floating population of users, frequent the neighborhood to buy and use drugs and to socialize with friends at the house addresses. Some of them are dealing from time to time. Others live for shorter or longer periods in squatted houses or with friends that have legal housing in the neighborhood.

Gaining Access

Once the research sites were chosen, the field research team, consisting of a community field worker (a respected post user) and the principal investigator, started hanging out at the Central Station and wandering through the streets of the second site. While doing so, old contacts with known users were reestablished and new contacts were made. The primary goal in this phase was to develop relations with high status users, (20) such as dealers and house address owners or with people that could introduce the team to these

places. "For a successful research relationship to evolve, ethnographers must establish legitimacy both for their presence and for their intentions" (20).

Therefore, trust, acceptance, and credibility are of vital importance. Both the community field worker and the principal investigator have worked in the drug field before and were known to be trustworthy. During informal conversations with drug users on their problems and life in the drug scene in general, the project's goals were discussed. Although many of the users were aware of the position of the researchers, this cannot be said of all the drug users that were observed in the course of the fieldwork. Often at busy house addresses where in the course of a few hours the composition of the premises would almost change completely the field researchers became almost invisible. A few times the principal investigator was suspected of being an undercover police officer. However, there were always one or more users around who could alleviate suspicions. These situations usually ended in laughter or an interesting conversation.

Enduring relationships have developed with a considerable number of the study participants. This is an inevitable consequence of spending many hours with the participants and interacting with in a non-judgmental manner.

Developing such trusting relationships can be seen as a sentinel for sound ethnography. It can, however, bring the researcher into difficult situations that cannot be anticipated. People often tell very intimate details about themselves and about their relationships with others. Gossip is frequent and the researcher must resist the temptation to offer opinions. Being a close observer, one witnesses the positive and negative elements of people.

In situations of need, the ethnographer is sometimes called upon to leave the role of participant observer and intervene. Such was the case when Harrie, one of the most important field contacts got into problems. Harrie had been using hard-drugs for about 23 years; methadone, heroin and primarily amphetamines (speed). During the time the research team was in contact with him, Harrie was almost always optimistic. Some months previously he began dealing heroin and cocaine and stopped using methadone and speed. Instead he began shooting cocktails of heroin and cocaine. The first months went

alright. Later he started having problems; he was robbed twice, his girlfriend left him and his cocaine use escalated. Attempting to feel better Harrie continued using large amounts of cocaine but grew more and more depressed. Two days after we had given him our phone number, Harrie called asking us to come over. When we entered his room we found him in a deplorable state. We talked about his problems. His life seemed "one black hole" to him in which he was stuck. He seemed exhausted and had not eaten for days. When we offered him to buy some food he refused, saying a shot of cocaine would make him feel better. He almost begged several times for money to get some coke, but did not consider cocaine to be a part of his problem. He agreed to go out and look for help. When we left, the fieldworker bought him some food; he ate it all. The following excerpt from that day's fieldnote documents this role change from observer to, in this case, case manager:

First we go to his methadone program. The staff is surprised and somewhat embarrassed. Harrie is asked why he had not said he was feeling poorly. However, days before Harrie made an appointment for a talk with the program's psychiatrist. This appointment had been postponed. First it looks like the staff does not know how to handle the situation. One staff member asks me to phone the on-call psychiatrist. I ask "should I do that?" Then they call the crisis center for drug users where it is agreed that Harrie can stay until his psychiatric appointment. We escort him to the center where the intake clerk underscores that he can only stay until Monday, the appointment date.

Some of the research participants, enduring relations were developed with, became key informants. They provided important supplemental information and insights. All locations were initially selected through neighborhood exploration and information from key- informants. At times, the research team accompanied participants on their daily rounds. In this way they also were introduced to new dealing places, using places, and private homes. During the fieldwork, some of the dealing places were closed down by the police.

Although these busts caused some turmoil, they did not seem to have a significant impact on the availability of drugs. New places quickly opened, sometimes on the same day at the same address. Often the researchers were introduced to the owner of a (new) address by a key- informant. By following the dynamics of the drug scene most of the neighborhood house addresses could be observed.

Instruments and Data Collection

The observations were structured using an observational protocol of endogenous and exogenous cues pertaining to the heroin rituals of injecting and smoking (chinesing or chasing the dragon). As the study was primarily concerned with the actual behaviors of the drug self-administration sequence (the preparation and ingestion of the drug, the use of paraphernalia, order/sequence, places, setting, time) and secondarily with demographics and other characteristics of the people performing the observed behaviors, the former are highlighted in the fieldnotes. Appendix A presents the protocol.

The observations were collected by carefully watching drug users perform their drug taking routines. Sometimes this was done while sitting a few meters from the observed person and sometimes while interacting with the observed person or another user. The contents of these interactions ranged from general conversation topics to specific discussions on the actual drug taking. Never were questions experienced as intrusive. Only on a few occasions written notes were taken while observing. In general, such note taking would be too intrusive. No structured interviews were conducted. When possible, additional information was collected from informal conversations. Other than providing an occasional sandwich or cup of coffee, no participation fees were paid. Detailed fieldnotes were recorded of 95 rituals. In 44 observations, subjects were smoking; in two, subjects were snorting; and in 49, subjects were injecting. The observations were recorded in the afternoon (94 percent) and early evening (6 percent). 93 percent of the observations were recorded at 14 different houses, where drug users live, deal drugs, or both. In 53 percent of the observations those houses were legally rented, in 9 percent they were

subleased and in 38 percent squatted. The remaining observations were recorded in public places, a greenhouse, deserted sheds behind abandoned buildings awaiting renovation and on the streets.

Data Processing, Coding, and Analysis

Fieldnotes were produced independently by the researchers after each fieldwork session or the following morning, based on short notes generally taken immediately after the observations. The fieldnotes were processed on personal computers using WORDPERFECT word processing software (34), transformed into ASCII files and entered into the ETHNOGRAPH, a computer program for the analysis of qualitative data (35). Appendix B presents an overview of this procedure. In this program the qualitative data were numbered line by line and coded in concordance with the observational protocol. The codes evolved constantly during the data collection and concurrent coding process. The coding process was primarily the responsibility of the researcher. However, some data was also coded by the fieldworker and the supervising professor and sometimes jointly coding sessions of researcher and fieldworker were held. Analysis was performed by the researcher in a continuous consultation and discussion process with the fieldworker and the supervisor. Memos were exchanged on diverse aspects of the data, coding and analysis. These memos were the material of regular research staff discussions. In these meetings innovative ideas were brought up that enriched and steered the analysis to a great degree. During this recurrent process of data collection, coding and analysis the from the outset general research questions were increasingly specified, while new ones emerged. Although its formal procedures were not always exactly utilized, the project methodology shares many characteristics with Anselm Strauss' grounded theory analysis (36).

In order to complement the qualitative analysis, the data were quantified by counting significant events and by recording available demographic and background characteristics of the subjects. These data were stored in two separate SPSSX data files. The numbers presented in this thesis were generated through these quantifications and are intended to support the

qualitative analysis. Drawn from a selected sample, they may not represent all drug users in Rotterdam, a common feature in studies of hidden populations.

In order to obtain information on the regular visitors of the Central Station, a survey was conducted. Every fifth visitor of the shelter adjacent to the Station was interviewed by indigenous interviewers who were trained by the community field worker. Sex and race of the interviewers resembled those of the C.S. population. In total 61 interviews were conducted on living conditions, social status and work situation, drug use, and time spent on the C.S. The data from the survey on the Central Station zone population have been used to supplement the data obtained from the observational protocols and cross-validate interpretations.

Where opportune Rotterdam methadone treatment data have been used. These data are collected in intake interviews and registered in the Rotterdam Drug Information System (RODIS). Most RODIS data stems from the yearly reports, except for those used in the secondary analysis in chapter seventeen. These were supplied by Drs. Jaap Toet of the epidemiology unit of the Rotterdam department of Health.

Characteristics of the Research Participants

The total number of research participants contacted was 192 --168 males and 24 females. Because no formal interviews were held not all the characteristics could be recorded. Hence, on the demographic variables, there are considerable missing data. Of the ages that were recorded, some were known exactly but most were estimated by comparing independent fieldworker ratings. 30% were 25 years or younger, 50% between 25 and 36 and 20% over 35 (N = 106).

Figure 3.1

This distribution resembles that found in the Rotterdam registration system of heroin users in methadone treatment (RODIS) (27%, 60%, 13% N = 1797) (37). 45.7% of the participants are native Dutch, 26.9% are of Moroccan, and 23.7% of Surinam origin. 3.7% have their roots elsewhere (N = 186). For a minority of 23% injecting was the main mode of administration. 77% were smoking their drugs (N = 162). Although 72.6% of the chasers were 30 years or younger, and 60.5% of the IDUs were over 30 years (N = 95), the chasers outnumbered the IDUs in the group above 35 years by 57% to 43%. 96% of the research participants used both heroin and cocaine (N = 105). This pattern of combined heroin and cocaine use started in the beginning of the eighties when an increasing number of heroin users added cocaine to their menu. That cocaine has become increasingly important to Dutch heroin users is cross-corroborated by the RODIS system where in the 1988 intake cohort a prevalence of 72 percent cocaine use is reported in the treatment population (37). Over the following two years this percentage decreased somewhat and stabilized in 1990 at 68% (38). Moreover, the fieldwork established that, at all house addresses and at the Central Station, both heroin and cocaine were available. Cocaine has become increasingly important to Dutch heroin users. A small group of older IDUs were also regular amphetamine injectors.

The survey held at the end of 1987 among the visitors of the shelter at the Central Station revealed figures, that in some respects are comparable and in others are somewhat different. There were less males in this sample (67%), the ages seemed somewhat lower (48% under 26 years (although 15% being 25), 42% between 25 and 36 years and 10% over 35) and the vast majority were white Dutch. The distribution of injecting and chasing was, however, very similar; Only 23% injected heroin and 28% injected cocaine. The prevalence of cocaine use was 74%. This survey furthermore indicated that the large majority (75%) of this specific population is hanging around the Central Station more or less all day. Almost half (45%) visits the station to meet other people and one-fifth come because of the stationed methadone busses. Almost half (41%) uses and buys drugs at the station and dealing is not an infrequent activity (15%). Unemployment and unfinished education are main

characteristics and one out of five is homeless. The main complaints that have been recorded are boredom, loneliness, absence of or poor housing and addiction.

Representativeness

This study reports in the first place on the drug users studied at the house addresses, private homes and public places in the two research sites. The results are, nevertheless, applicable to the larger population of users of heroin and cocaine. In particular to those who buy and use these intoxicants at house addresses or around the Central Station in Rotterdam. Although the drug scene in Rotterdam has some specific features, many aspects may well be comparable with those in other Dutch cities.

A possible source of bias may be found in the selection of the research sites. In theory, it is possible that in other areas, different behavior can be observed. However, a number of observations were recorded in other areas of the city and the use of heroin and cocaine has also been observed outside of Rotterdam and even outside The Netherlands. These observations were not in contrast with the general picture that emerged from the data.

The characteristics of the research participants may have biased the results in another fashion. When compared to recent studies of heroin users (both in and out treatment settings), it can be determined that the distribution of ages and administration rituals is rather similar (16, 27, 28, 37, 39). Regarding sex, ethnic distribution and prevalence of cocaine use the sample diverges, in particular from treatment populations (28, 37, 39). These differences may well be explained by the unique design of the study --the observers were present where the action is, though not undercover, often unnoticed, ignored or even forgotten-- which did not require active or conscious cooperation of each participant. At the other hand, users that have others buy their drugs for them are excluded.

As the majority of observations were conducted at places where these drugs are sold, the high proportion of minority users in this sample may be due to a larger presence at these places or a higher involvement in consumer level heroin and cocaine dealing (40). It can, however, not be excluded that the found distribution presents a more realistic image of the actual proportion of minority drug users, as they seem less willing to participate in (survey) research (17) and are probably underrepresented in drug treatment facilities (28). This latter suggestion is somewhat supported by the higher proportion of ethnic minorities that received methadone in custody at Amsterdam Police stations, (39) although this may also indicate that minority drug users are simply more often arrested (16).

The comparably low proportion of women in the sample needs a somewhat more elaborate explanation. It is sometimes assumed that female drug users are underrepresented in drug treatment programs (41, 42). Although the found distribution seems to contradict this assumption, this may not be the case. First of all, the low number of women is caused by the high proportion of ethnic minorities --the percentage of women is about three to six times lower in these groups (28). Further reasons for the low proportion of women in the sample may be similar to those put forward for their relative absence in treatment programs. In general, the drug scene, including the treatment programs is male oriented and driven. Female users may come less often to house addresses, because, if around, their husbands or boyfriends score the drugs, while they wait at home (and sometimes take care of children) for their partner to return with the drugs. Alternatively, independent women may use at other times and places than observed. For example, female users involved in sex work may frequent addresses, that only sell to sex workers. Nevertheless, the observations of the drug use rituals of women did not cause reason to assume that, within the two main rituals, women partake in conceptually distinct rituals (however, the functions and meanings for women may differ).

The higher prevalence of cocaine use may also partly be explained by the high proportion of minority users, who use cocaine more often (16, 28). In addition, the subjects of the observations were all active users --they were caught in the

act of using heroin and/or cocaine. As the level of heroin use is positively related with the use of cocaine, (17, 28) non- users of cocaine may have been somewhat underrepresented at the house addresses --they come less often. At the other hand, participation in methadone programs decreases (the frequency of) both heroin and cocaine use (43). Methadone treatment data is thus not representative for active out-of-treatment users.

Having taken these factors into consideration, it can be assumed that the study sample presents a rather fair representation of the population involved in regular use of heroin and cocaine in Rotterdam.

References

1. Zinberg NE: Drug, set, and setting: The basis for controlled intoxicant use. New Haven: Yale University Press, 1984.
2. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 137-148.
3. Harding WM, Zinberg NE: The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 111-134.
4. Bennett T, Wright R: The drug-taking careers of opioid users. *The Howard Journal of Criminal Justice* 1986; 25(1): 1-12.
5. Meier RF: Norms and the study of deviance: a proposed research strategy. *Deviant Behavior* 1981; 3:1-25.
6. Becker HS: *Outsiders: Studies in the sociology of deviance*. New York: The Free Press, 1973.
7. Faupel CE: Drug availability, life structure, and situational ethics of heroin addicts. *Urban Life* 1987; 3,4: 395-419.
8. Murphy S: Intravenous drug use and AIDS: notes on the social economy of needle sharing. *Contemporary Drug Problems* 1987; fall: 373-395.
9. Edwards G, Arif A, Hodgson R: Nomenclature and classification of drug- and alcohol- related problems: a WHO Memorandum. *Bulletin of the World Health Organization* 1981; 59(2): 225-242.
10. Grund J-PC: Over de definitie van het begrip verslaving. Rotterdam: Instituut Preventieve en Sociale Psychiatrie, Fakulteit der Geneeskunde, Erasmus Universiteit Rotterdam, 1984.
11. Peele S: *The meaning of addiction. Compulsive experience and its interpretation*. Lexington: Lexington Books, 1985.
12. Cohen DAP: *Drugs as a social construct*. Amsterdam: P. Cohen, 1990. (Dissertation)

13. Berridge V: Opiate use in England, 1800-1926, *Annals New York Academy of Sciences* 1982; 398:1-11.
14. Vatz RE, Weinberg LS: *Thomas Szasz Primary values and major Contentions*. New York: Prometheus Books, 1983.
15. Szasz T: *Ceremonial Chemistry: The ritual persecution of drugs, addicts and pushers*. Garden City NY: Doubleday, 1974.
16. Korf DJ, Hoogenhout HPH: *Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drugshulpverlening*. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
17. Grapendaal M, Leuw E, Nelen JM: *De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan*. Arnhem: Gouda Quint, 1991.
18. Kotarba JA: *Ethnography and AIDS: Returning to the streets*. *Journal of Contemporary Ethnography* 1990; 19(3): 259-270.
19. Lambert EY, Wiebel WW: *Introduction*. In: Lambert EY (ed.): *The collection and interpretation of Data from Hidden populations*, NIDA Research Monograph 98. Rockville, MD: NIDA, 1990: 1-3.
20. Wiebel WW: *Identifying and gaining access to hidden populations*. In: Lambert EY (ed.): *The collection and interpretation of Data from Hidden populations*, NIDA Research Monograph 98. Rockville, MD: NIDA, 1990: 4-11.
21. Agar MH: *Speaking of Ethnography*. Sage University Paper series on Qualitative Research Methods, Volume 2. Beverly Hills, CA: Sage, 1986.
22. Becker H: *Field work evidence*. In: *Sociological Work: Method and Substance*. New Brunswick, NJ: Transaction Books, 1970.
23. Douglas JD: *Investigative social research*. In: *Individual and team field research*. Beverly Hills, Ca.: Sage. 1976.
24. Andel P van: *Anatomie van de ongezochte vondst. Serendipiteit in wetenschap, techniek, kunst en dagelijks leven*. NRC Handelsblad, Wetenschap en Onderwijs, 20-08-1992.
25. Walpole H. cited in Andel P van: *Anatomie van de ongezochte vondst. Serendipiteit in wetenschap, techniek, kunst en dagelijks leven*. NRC Handelsblad, Wetenschap en Onderwijs, 20-08-1992.
26. Merton R: *Social theory and social structure*. Glencoe, Ill: The Free Press, 1968.
27. Intraval: *Harddrugs en criminaliteit in Rotterdam*. Groningen: Stichting Intraval, 1989.
28. Toet J: *Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87*. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
29. Merton R: *Three fragments from a sociologist's notebook: Establishing the phenomenon, specified ignorance, and strategic research materials*. *American Sociological Review* 1987; 13: 1-28.
30. Korf DJ, Poppel PWJ van: *Heroïne-toerisme: Veldonderzoek naar het gebruik van harddrugs onder buitenlanders in Amsterdam*. Amsterdam: Stadsdrukkerij van Amsterdam, 1986.
31. Korf DJ: *Heroïne-toerisme II: Resultaten van een veldonderzoek onder 382 buitenlandse dagelijkse opiaatgebruikers in Amsterdam*. Amsterdam: ISG, Universiteit van Amsterdam, 1987.

32. Stern LS: Personal communication, 1991.
33. Bos JT, Grund J-PC, Voskühler D: Heroïne in de wijk: Blijft de hulpverlening erbuiten? Rotterdam: SAR, 1983.
34. WordPerfect Corporation: Wordperfect versions 4.2, 5.0, 5.1 (computer programs), Orem, Utah, USA, 1989.
35. Seidel JV: The Ethnograph version 3.0 (computer program) Qualis Research Associates, Littleton, CO, USA 1988.
36. Strauss AL: Qualitative analysis for the social sciences. Cambridge: Cambridge University Press, 1987.
37. Toet J, Ven APM van de.: Het RODIS uit de steigers: Resultaten 1988 Rotterdam. Report 65, GGD Rotterdam afdeling Epidemiologie, 1989.
38. Toet J: Het RODIS onder de loep: Sexe-verschillen, veroudering en nieuwkomers in de Rotterdamse drugshulpverlening. Rotterdam: GGD-Rotterdam e.o., 1991.
39. Reijneveld SA: Methadonverstrekking in Amsterdam in 1990: Jaaroverzicht van de Centrale Methadon Registratie. Amsterdam: GG&GD Amsterdam, Stafbureau Epidemiologie en Documentatie, 1991.
40. Korf DJ, Kort M de: Drugshandel en drugsbestrijding. Amsterdam: Criminologisch Instituut Bongers, UVA, 1990.
41. Rosenbaum M, Murphy S: Women and addiction. Process, treatment and outcome. In: Lambert EY (ed.): The collection and interpretation of Data from Hidden populations, NIDA Research Monograph 98. Rockville, MD: NIDA, 1990: 126-127.
42. Rosenbaum M, Murphy S: Getting the treatment: Recycling women addicts. Journal of Psychoactive Drugs 1981; 13(1): 1-13.
43. Grapendaal M: De tering naar de nering. Middelengebruik en economie van opiaatverslaafden. Justitiële Verkenningen 1989; 15(5): 23-46.

HEROIN RITUALS

Contents

Introduction

Chasing Heroin

Injecting Heroin

Conclusion

References

Introduction

In The Netherlands two predominant routes of heroin self-administration are prevalent with an uneven distribution; smoking and injecting. In this study 23% of the contacted drug users inject and 77% smoke their drugs. Several other Dutch studies mention similar prevalence distributions (1, 2, 3). From an ethnographic perspective these routes of administration when observed in their social context and meanings can be termed heroin rituals. Injection has been the predominate ritual among heroin users in Western societies while heroin smoking has been the most common ritual pattern in Eastern societies. However, there has been a process of continual crossover with Western heroin rituals appearing in the East and Eastern heroin rituals appearing in the West.

The Netherlands provide a relatively unique social situation because both Western and Eastern heroin rituals appear and are relatively stable. Recently heroin smoking was also reported in the United Kingdom (4, 5, 6). The most common form of heroin smoking in the Netherlands is called chinezen (chinesing or chasing) by users, revealing its Eastern origins. In Hong Kong, this heroin smoking ritual is called chasing the dragon (7).

Injecting, which is the typical western heroin ritual, is in The Netherlands called spuiten or shotten. Shotten is derived from shooting, an American drug subcultural term for injecting. Spuiten is a relatively general term, that can just as easily be used in a medical as well as in a subcultural context. On the basis of sociolinguistics one might predict that chinezen would be considered a more deviant behavior, because it is associated with an exotic culture. However, the opposite is the case, where

injecting mostly is preceded by chinezen in a drug use career. Heroin, and most other opiates, can be taken into the body in more, although less efficient, ways. Simple oral ingestion (mixed with food or drink or not), sniffing and smoking in a cigarette, all produce a high. Besides for economic reasons, these routes are not preferred by users because they produce a comparably low flash or rush (the initial physiological impact effect). In the following two sections a detailed description will be presented of chasing and injecting, the two most common administration rituals of Dutch heroin users.

Chasing Heroin

The descriptive term chinezen (chinesing or chasing) refers to the behavior of trying to inhale the curling fumes of heroin vapor with a tube as the heated liquid heroin flows along a piece of foil. It is usually mentioned as a form of drug smoking. However, contrary to the logic of the word smoking, the drug is actually not smoked. Technically, when heated, the drug melts and subsequently vaporizes. The vapors are then inhaled. So the drug is not burned, causing smoke, like with tobacco. For practical reasons the term smoking will be used, as it is most common used. The following fieldnote presents a representative depiction of chasing:

With a small pocket knife she takes a knife tip of heroin from the paper package and puts it on the oblong strip of aluminum foil that lies in front of her on the table. She takes the foil in her left hand and with her right hand she puts a tube with a length of ± 7 cm and a diameter of ± 0.5 cm in her mouth. With the same hand she takes the disposable lighter from the table and lights it. Before holding the flame under the foil she checks the height of the flame. Then she bends a little over and brings the foil at approximately 10 cm from her mouth, a little tilted and parallel to her body. The end of the tube is now ± 1 cm away from the little pile of light brown powder on the foil, slightly behind it. Simultaneously, she carefully positions the lighter, so that the top of the flame is ± 1 cm under the foil where the heroin lies. The heroin powder melts, turns into

a dark reddish brown drop and starts to run slowly along the length of the foil leaving a brown track behind. With the tube she carefully follows the drop and inhales the fumes that curl up from the heated liquid. When the drop approaches the end of the foil she stops heating it, while continuing to inhale for a second. The drop solidifies and spreads out a little. She puts the foil back on the table and takes the tube from her mouth. After about 10 seconds she exhales.

This fieldnote shows several important features of chasing heroin. In order to chase heroin one needs, besides the drug, certain distinctive paraphernalia, such as a knife, aluminum foil, a lighter, and a tube-shaped pipe. Furthermore, one needs the knowledge and skills to use these tools in the required manner. Some of these need special preparation. Finally, there are some requirements for the place where chasing takes place.

Both chasers and IDUs habitually carry knives. Although some users may think of their knives as a status symbol or weapon for self defense or robbery, they will find themselves using it mainly in handling drugs. A dealer uses a knife to scoop the drugs from his stash into the balance or to eyeball the smallest sales unit, a halve streep (a half stripe = ± 0.05 gram) at the point of the knife. With a knife the user takes the heroin out of the package and puts it on the foil or, when injecting, in the spoon. The primary function of knives is instrumental in the process of drug use. Therefore, most of the observed drug users use a small, easy to handle pocket knife. Only once a large, dagger type, knife was observed in the process of preparing a considerable amount of cocaine for smoking. In contrast, the blade of the smallest knife observed measured only 3 cm. When a knife is unavailable, users may turn to less preferable alternatives, such as a screw driver, a dining knife or a stanley knife. But, pocket knives are favored as these are more appropriate in handling small quantities of the precious powder.

The aluminum foil from which heroin is smoked is ordinary kitchen foil and can be obtained in any supermarket, where it is sold on roles of 25 meter x 30 cm. The common size of the smoking foil is $\pm 5-7 \times 15$ cm, which is half of the width of the roll. Chasers were observed just tearing off a piece of foil to have a quick chineesje. This happens often when they are in a hurry or in withdrawal. But frequently they put

relatively considerable time in the preparations of the foil and also the pipe (see below). Then the foil is cut or torn neatly at the preferred size, and stretched and rubbed to take out the wrinkles. Before putting the drug on it, first the user heats the foil with a lighter until some vapors come off:

He takes the role of aluminum foil that lies on the table, tears off a piece (\pm 15 by 7 cm), heats it first, puts some heroin on it and starts chasing.

These vapors origin from a coating on the foil. Heating the foil prior to chasing is meant as a health precaution, preventing the inhalation of gasses suspected to be harmful. When regular aluminum foil is not available, users will look for alternatives, such as the foil from cigarette packs. However, not all brands are suitable; Pall Mall and Caballero are preferred. The foil of these brands is glued to a paper foil, but can be made easily into a smoking foil by burning of this layer of paper. Any other metal packing foil (e.g. from chocolate bars, sweets or other food products) will serve the purpose, as long as it is thick enough and can be used right away or made usable by simple action.

The lighter is an important tool for a chaser. Although one young user was observed heating his foil with an expensive Dupont lighter, most smokers prefer a transparent disposable lighter with an adjustable flame. The flame that is needed to heat a spoon has to be rather big, but when chasing, the flame necessary to melt and vaporize the drug may not be too high, as the aluminum foil could be damaged or the drug could catch fire. It has to be disposable for more than one reason. Most lighters are not designed to stand heat for periods much longer than the time it takes to light a cigarette. When chasing for prolonged time the mechanism can be deranged or damaged by the heat. For that reason, chasers prefer disposable lighters that can be taken apart and then be readjusted beyond the standard range of the flame adjustment mechanism. Likewise, chasing takes a lot of gas and a chaser with an empty lighter has a serious problem. This also accounts for the preference for a transparent type; the gas level can be monitored and a new lighter can be purchased in time.

The tube-shaped pipe is another important piece of equipment. In 1975, when chasing was just emerging as a heroin administration route, the author often observed (in particular novice) chasers using a rolled up '10.- bill to inhale the fumes.

Since then, the genuine chasing pipe has developed into an ingenious piece of craftsmanship, although any tube-shaped object, such as pens, straws or any rolled up piece of paper will do in emergencies. Normally paperboard or thick paper that keeps its shape when rolled up is used. The preparation of a pipe (and a smoking foil) varies, depending on several factors. The time, concentration, and care put into the construction of a pipe seems to depend on variables such as craving, the availability of time and materials, the setting of use, as well as the skills and experience of the user. For example, a clear relationship between craving and the functionality and esthetics of the design can be observed. High craving mostly results in a fast made pipe. As one user said: "Don't care how it looks now, I'm sick, I need a smoke fast" and he tore off a piece of a magazine cover. In the following fieldnote two users rushed into a dealing place, bought a quarter gram of heroin and sat down at the table designated for using:

The customer prepares for chasing. He does not have a knife and borrows one. With the knife he takes some heroin from the pack and puts it on his friend's aluminum foil. ... Then he makes a pipe of a piece of paperboard of ± 7 cm. His friend uses a rolled up packing of a cookie, which comes with a cup of coffee in a bar. He says they are in a hurry because they are sick, otherwise he would have taken more time to prepare a good pipe like the others at the table use.

The pipe this user refers to has a number of distinctive, prescribed specifications. It is made of aluminum foil, paperboard from a cigarette paper pack and a cigarette paper. In The Netherlands it is common to smoke hand rolled cigarettes and the slip of the cover of the cigarette paper ($\pm 7 \times 3$ cm) has just the right format for a pipe. The cover slip is wrapped in a piece of overlapping aluminum foil. The overlaps are folded around the paper and then the whole thing is rolled up (e.g. around a pencil) so that the folds are on the outside. Finally the aluminum foil-covered pipe is rolled in a cigarette paper to keep it together. Users often make little pieces of art of their pipes. However the design is not just art for art's sake, but, as can be witnessed in the next excerpt, highly functional:

Boris is chasing cocaine and heroin. When he has finished the dose on his foil, he opens up his pipe. It is made of aluminum foil, a piece of paperboard from a cigarette paper pack and a cigarette paper. The foil is carefully wrapped around the paperboard. Then it is rolled up with the foil towards the inside of the tube and kept together with a cigarette paper. It has the size of a filter cigarette. After taking off the cigarette paper, Boris folds back the foil. On the foil that was on the inside of the pipe is a light brown film of a heroin and cocaine mix residuum. First Boris constructs a new pipe like the old one. Then he chases what is left from the old tube.

The foil covered pipe has thus an important instrumental function. While inhaling the vapors through a pipe, some of the drug will deposit on the inside of the pipe, covered or not. However, when an aluminum foil-covered pipe is used, this deposit is 100 % re-usable without performing complicated procedures. It depends on the quality of the drug and on the smoking technique how big the deposit is. Observations indicate that this quantity may go as high as up to 40% of the drug vapors that have passed through the pipe. Users have a specific name for this deposit:

The man looks into his pipe, he has put tin-foil inside. He says: "Let me see, how much interest there is inside".

Some users report they save the pipe to smoke the interest in the morning when they have neither drugs nor money. A few users are able to get their interest even out of a paperboard pipe. This, however, requires more skills:

Some moments after the man finishes chasing the other takes his paperboard pipe from the table. He folds it open and puts it on a piece of aluminum foil. He carefully heats the paperboard so that it won't burn. This way the deposit of the heroin vapors runs from the paperboard on the foil. When he is finished he chases this bit.

It is clear that chasing is a complex practice that requires a distinguished level of knowledge and skills. This can also be observed in the smoking technique of users.

Contrast the following fieldnote with that of the woman at the beginning of this chapter:

On the first floor Jack is busy scraping out the last remains of heroin from a plastic sandwich bag. With his thumb he rubs the heroin from the plastic. Then with his knife he scrapes it off his thumb and throws it on an aluminum foil. He gives the foil to the blonde guy who starts chasing through a rolled up piece of paperboard. He does not heat the foil carefully and misses many of the fumes.

Experienced chasers dose the flame carefully and keep the end of the tube right behind the drop, as close as possible. Their lighter and tube move almost simultaneously. When the drop runs over the foil it leaves, depending on the cuts and impurities, a light to dark brown track behind. By adjusting the distance of the flame to the foil and the angle of the foil, the speed, path and number of tracks of the drop are influenced.

He keeps the lighter very close to the foil, causing the heroin to burn quickly. The heroin drop makes only a short trail because of this.

The amount of vapors, the speed with which the drug runs across the foil and consequently how many chineesjes come out of each dose depend to a large extent on how much heat is added.

Finally, the place where heroin is chased is of importance. Although people were observed chasing on the streets, the best results are obtained in a sheltered place, where wind cannot influence the vapors.

Injecting Heroin

Theoretically, there are three ways one can inject a drug: subcutaneous, intramuscularly and intravenously. Most injecting heroin users prefer intravenous injecting (mainlining) --the most direct way of ingesting any drug. The next fieldnote gives a good impression of the intravenous self-administration of heroin:

The man starts to prepare a shot. He puts his spoon on the table and throws in a knife tip of heroin. He adds some lemon juice and with his

syringe he gets some water which he carefully squirts in the spoon, around the heroin powder just under the edge of the spoon. He heats the spoon and when the stuff has dissolved he stirs and draws the solution in the syringe through a piece of cotton. After checking the syringe for air bubbles, he puts his syringe on the table. Then he takes his belt and puts it around his left arm. Making a fist he pumps up his veins. He looks carefully at his arm and then sticks in the needle. When he pulls the piston back, blood immediately runs into the syringe. then he pushes the piston about halfway. Then he draws up some blood and pushes the mixture into his vein. He moves the syringe a little, draws \pm 1.5 cc. blood and pushes it in again. All the time his hand is a fist. Then he unties the belt, pulls the needle out, puts it down and waits about two minutes, concentrating on the rush.

This observation shows that, as is the case with chasing, before heroin can be injected the user must perform a determined sequence of activities and in this sequence a number of prescribed paraphernalia and ingredients are essential. The paraphernalia that are necessary to prepare and administer a heroin injection are a knife, a lighter, a cooker, a filter, a syringe, and a tourniquet. Furthermore, specific ingredients are necessary, water and an acid. In the following, these will be discussed in the order in which they are generally used.

Like chasers, IDUs use a knife to scoop the heroin from the pack and eyeball the dose, before putting it into the cooker. With only one exception, all the cookers observed were spoons, both diner spoons and tea spoons. The spoons are bent so that when put down they rest stable and level. Normally, first the heroin is put into the spoon followed by a little water and an acid. Water is an important ingredient for IDUs as it is necessary to dissolve the powder drugs. When available IDUs will generally take water from a tap. However, not all observed self-injections were administered at places with running water. When an injection is taken at a place without running water, like some squatted houses, the water is often stored in cups, bottles or a canister. IDUs that inject outside mostly carry a little bottle of water on them or fill a syringe with water, e.g. at the place where they bought their drugs but were not

allowed to inject. Although some IDUs reported knowing other users that had used water from a water closet, a puddle or the gutter, this was not observed in this study. Dutch IDUs must use an acid to dissolve the base-heroin, which is designed for smoking. In the late 1970s, South West Asian base heroin was introduced in large quantities, substituting South East Asian heroin-HCl. First many IDUs had problems with cooking up this new sort of heroin as they did not know how to prepare it. However, soon the necessary knowledge spread. IDUs commonly use lemon juice in little, sometimes lemon-shaped, plastic bottles. Sometimes the juice from a fresh lemon is used. On a small basis the use of crystalline ascorbic acid was observed. In one of the networks observed, this was introduced by Harrie, one of the key-informants:

I learned to use it from a pharmacist in Limburg where I lived at that time. He told me it was safer to use ascorbic instead of fresh lemons or vinegar. He knew I was shooting because I always bought my syringes in his pharmacy.

Most users put in the heroin, acid and the whole amount of water at once. Others boil the heroin first with the (liquid) acid only or with only a part of the water:

After Mohammed has cleaned the cup with his jacket he puts in the heroin. Out of his jacket he takes a lemon and cuts it in two, keeps one half above the scale and by pressing it he puts a couple of drops of lemon-juice into the cup, enough to cover the Heroin that he put in just before. He then adds a few drops of water from the plastic bottle. "I first boil it with much lemon and little water, it dissolves better this way". He puts his lighter under the scale and boils the contents.

The reason for this preference is that the base heroin is believed to dissolve better in a strong acidic solution. When all ingredients are in the spoon, it is heated from the bottom, normally with a disposable lighter. IDUs seem less meticulous regarding their lighter than chasers as they only use them to cook the heroin. Sometimes other heat sources are used, such as stoves or, as can be witnessed in the next field

observation, the alcohol swabs that are dispensed by the needle exchanges to clean the injection site prior to injecting:

Back home Richard and Chris start preparations to shoot up. ... Richard puts the spoon in front of him and ... opens the heroin package, holds it above the spoon and empties it. He adds some lemon and water.

Meanwhile Chris opens two injection swabs and puts them on the edge of the ashtray. When Richard is ready he nods, which Chris understands as a sign to set the swabs on fire with his lighter. This produces a flame from \pm 4 cm high, above which Richard now holds the spoon to boil the contents.

In the argot of the Rotterdam heroin users injection swabs are sometimes called *vlammetjes* (little flames).

The time the mixture of heroin powder, acid and water is heated varies. In some observations the cooking took less than a minute, in others more than four minutes. This seems to depend on drug quality (particularly on the cuts), quantity of acid and also idiosyncratic differences. Some users boiled the drug mixture once, other users boiled it a few short times. Sometimes when not satisfied with the result, users add a little extra acid and, when necessary, water and boil it again. When the heroin is dissolved, the solution is given time to cool off a little, as injecting the hot liquid may cause intense irritation and pain.

Subsequently, a filter is put in the spoon and through this filter the solution is drawn into the syringe. The most widely used type of syringe in The Netherlands is a 2 ml with a detachable needle (25Gx5/8" - 0.5x16mm). These are most popular and dispensed at most Dutch needle exchange programs. A minority of users prefers the 1 ml insulin type (27-28Gx1/2" - 0.36- 0.4x12mm). IDUs use several materials as filters; most commonly cotton wool. A little pluck is rolled into a ball. Another frequently used material is the filter from a cigarette:

He picks up a cigarette from the table and breaks off the filter. Then he tears some fibers from it and rolls them between his thumb and point-finger into a small ball, that he puts into the spoon. Ensuing, he takes the needle from his syringe and puts it in the needle cap. Then he puts

the syringe on top of the filter, holding it with one hand and using his other hand to draw the plunger.

When these two materials are not available users resort to less preferable alternatives, such as a piece of tissue or clothing fibers:

Mohammed asks Abdul for a filter. Abdul says "I've forgot to buy cigarettes". "Well, then I have to do it like this" Mohammed responds, and he pulls some lint from his socks, rolls them into a small ball and puts it in the solution.

Tissue and clothing fibers are less favorable because the former can easily fall apart and then the fibers may be drawn into the syringe and the latter may be dirty; both causes for, at minimum unpleasant, infections. Now the injection is ready for use. However, some persnickety users are not satisfied yet:

When the spoon looks empty, Doug adds some drops of water. He puts the syringe back on the cotton-ball, pushing lightly, and drives the ball through the spoon gathering the last remainings. He stops in the middle of the spoon and draws the plunger again, emptying the spoon finally. After finishing this he picks up the spoon and checks it for remnants.

Now the solution is in the syringe, it is checked for air bubbles, which are expelled by tapping the barrel. When finally everything is ready for the injection, most users use a tourniquet to bring the veins to the surface. IDUs were observed using belts, ropes, electrical wires and medical devices especially designed for this purpose. Before the injection site (mostly one of the arms) is tied off, often some exercise is undertaken; bending and stretching the arm rapidly, swinging it around or making a fist. Sometimes users rub and tap the injection site. These actions are all intended to make the veins swell to the surface:

Freek used the same electric wire as Harrie did. He tied it around his right arm and searched for a vein. With his forefinger he palpated his skin. He seemed tense. It took him some time to locate a suitable vein and more than once he took up the syringe but put it back on the table

again because he was not sure. He changed the wire to his other arm and repeated the procedure. Then he found a good spot and pushed in the needle. He drew up some blood and pushed the piston down, then he drew up some blood again, pushed again and repeated this sequence several times. When he finished he rubbed some Hirudoid ointment on the needle wound.

Not all IDUs use a tourniquet. They have veins that are thick enough or just under the surface of the skin, to hit easily, without tying them up. Richard presents a good example:

Richard sits down on the sofa to take his shot. Richard doesn't have to tie off his arm. Chris says he's jealous of Richard's veins; Kabela he calls them. Richard hits the vein he wanted to use in one try and presses the contents out of the syringe into the vein without interruption. ... After booting two times he takes the syringe out of his arm, opens an alcohol swab and puts it on the injection site.

The argot word kabela (cables) signifies the importance for IDUs of the condition of the veins. Some users have great problems hitting a vein, even when using a tourniquet. Such was the case with Chris, Richard's running partner:

Chris needs much more time and efforts to hit a vein. First he tries his left hand. With a belt he ties off his hand. The belt is placed around the under arm. With his other hand he taps upon the intended injection site to swell the veins. Then he inserts the needle, pulls back the plunger and looks into the syringe to see if blood is entering. It is not. Chris moves the needle under the skin probing for a vein. Three times he pulls up the plunger but without success. After the third attempt he pulls out the needle and puts it down. With toilet paper he cleans his hand because there is a lot of blood on it. Then he starts again at about the same spot, but again he fails. Now he tries his left underarm. He first puts the belt higher around his under arm. He inserts the needle and moves it around under his skin. Pulls up the piston but fails again. He

takes it out and puts it back in again, some 2 cm from the last spot. Again a failure. He takes out the syringe again and cleans his arm from the blood. There is also some blood in the syringe. "I have to hurry now otherwise my needle gets clogged". He now tries his right arm, at the wrist on the inside, near where normally the pulse is taken. He puts the belt around his right underarm. Before he sticks the needle in, he first looks closely to see how the veins run under his skin. He thinks, considers and then tries again. Finally he has a hit and takes of the belt right after. Then he wants to boot, which isn't easy to do at this spot. Only with much trouble he can manage to do it. Now he takes out the syringe, takes a swab from the table and cleans the spot. The whole operation took him about 6 minutes.

Six minutes may seem like a long time for one injection. However, during the fieldwork users were observed that were sometimes busy for more than an hour, trying to inject. In the last three fieldnotes two additional aspects of the injecting ritual are observed. The first is, that all users were booting (drawing blood back into the syringe and reinjecting one or more times). Booting is a common practice among the injecting research participants. However, a pattern could not be distinguished in this behavior. Sometimes, users boot and at other times they do not. The second aspect that these three fieldnotes indicate is that many IDUs take an interest in maintaining their health status. One uses Hirudoid ointment, a topical preparation for the prevention and treatment of embolisms and other venous damage, and the others use alcohol pads, although not prior to injecting.

Conclusion

Most heroin users, both chasers and IDUs, have developed quite fixed sequences of drug ingestion during their careers. In the foregoing, it is demonstrated that these sequences are subject to a great deal of patterning and stylization; important conditions for ritualization. A heroin user, when observing another user at any point in the drug administration sequence, will definitely know what has preceded and what comes next. He will probably have a good sense of what the observed person is

thinking and feeling and the observation may even elicit similar thoughts and feelings.

These stereotyped patterns are, partly, dependent upon the setting in which the drug taking takes place. There is inevitably a big difference between shooting up in a back alley and at home, or smoking heroin in a group at a house address. The Rotterdam heroin scene is characterized by a relatively calm climate and most drug use and dealing is located indoors. However, it is not only the setting of drug use that influence the patterns of ingestion. The drugs themselves can play a role also. This becomes apparent when investigating the use of cocaine among the heroin users in this study, which is the subject of the next chapter.

References

1. Buning EC, Coutinho RA, Brussel GHA van, Santan GW van, Zadelhoff AW van: Preventing AIDS in drug addicts in Amsterdam. *Lancet* 1986; ii: 1435.
2. Korf DJ, Hogenhout HPH: Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drughulpverlening. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
3. Korf DJ, Aalderen H van, Hogenhout HPH, Sandwijk JP: Gooise Geneugten: Legaal en illegaal drugsgebruik (in de regio). Amsterdam: SPCP Amsterdam, 1990.
4. Parker H, Bakx K & Newcombe R: Living with heroin: The impact of a drugs 'epidemic' on an English Community. Philadelphia: Open University Press, Milton Keynes, 1988.
5. Gossop M, Griffiths P, Strang J: Chasing the Dragon: Characteristics of heroin chasers. *British Journal of Addiction* 1988; 83: 1159-1162.
6. Burr A: Chasing the Dragon: Heroin misuse, delinquency and crime in the context of south London Culture. *British Journal of Criminology* 1987; 27: 333-357.
7. Kaplan CD, Janse HJ & Thuyns H: Heroin smoking in the Netherlands, In: Drug abuse trends and research issues, Community Epidemiology Work Group Proceedings. Rockville: NIDA, 1986: III-35-45.

THE NESTING OF COCAINE IN HEROIN RITUALS

Contents

Introduction

Cocaine Smoking

Cocaine Injecting

Varying Patterns of Cocaine/Heroin Use

Consequences of Cocaine Use

Conclusions

References

Introduction

The history of cocaine use in The Netherlands can be traced to the end of the nineteenth century. As in many other countries at that time, cocaine was an important ingredient of many of the, so called, patent medicines or spécialités used for self medication in traditional folk medicine of the lower classes. However, cocaine was also used in higher social classes and by practitioners of medical and para-medical professions. By the year 1912 the number of cocainists was estimated to be higher than the number of morphine users (1). Besides being a consumer country, The Netherlands played a major role in the production and distribution of cocaine. The coca leaf grown in the Dutch Indies was of higher quality than those from South America. In 1911 The Netherlands were, with a world market share of 22%, the most important cocaine producer in the world (2). During the First World War the production of coca-leaf in the Dutch Indies decreased but soon after the war the production increased again very rapidly. In this period, a strong increase in the number of cocainists in Europe occurred (3). Although officially all the cocaine manufactured in The Netherlands was solely for medical purposes, in 1922 the Dutch production alone was sufficient for the world demand for medical purposes as was the combined export of Bolivia and Peru. However, cocaine for recreational use was in these days distributed through medical channels by which the medical demand seemed much larger than it in reality was (1).

Apart from the use of alcohol, the recreational use of (illegal) drugs in The Netherlands became popular in the late 1960s and early 1970s. At this time the availability of cocaine was still very limited. In the early 1980s cocaine became more readily available in The Netherlands and it became very popular in some discotheque- and nightclub-circuits of the big cities in the Randstad (the large urban complex of Amsterdam, The Hague, Rotterdam and Utrecht). In the media, cocaine had the image of a safe drug and among some drug treatment professionals it was also viewed much less problematic than heroin (4). As it was very expensive (± 1250.- a gram), it was seen as a jet set drug. In the course of the 1980s, cocaine use spread throughout larger segments of Dutch society. A 1988 E.C. pilot epidemiological study reveals some distinctive cocaine using groups with little overlap. 29% were actors and artists, 21% blue collar workers, 18% students, 18% unemployed, 7% white collar, 4% pimps and prostitutes and 4% were people with restaurant, bar and cafe occupations (5).

In the early 1980s cocaine use grew rapidly in the heroin scene. Already in 1981 in many places on the Kop van de Zeedijk in Amsterdam (at that time a main heroin copping area in Amsterdam) heroin and cocaine were sold together. However, a considerable number of users had prior experience with cocaine. 41% of client intakes of the Amsterdam methadone bus in 1979 used cocaine. In 1987/1988 this had increased to 77%, while in 1989 this was 73.2% (6). Unfortunately, frequencies and (daily) doses are unknown. It is therefore unclear whether this early cocaine use was incidental or part of a regular pattern. As a consequence of their dominant position in the lower levels of heroin dealing, the Surinamese heroin users were the first group in the heroin scene that became heavily involved in the use and dealing of cocaine. Indicators of arrest statistics from the Amsterdam police and of intake data from a Rotterdam low threshold methadone program for ethnic minorities, suggest a steady rise of cocaine use and dealing in this group through the years 1983-1985 (e.g. in 1984, of 612 cocaine-related arrests, 41 % concerned Surinamese, 33 % were Dutch, 4 % Moroccans, 9 % Germans, 2 % Americans and 11 % others) (7).

A number of snowball sampling studies conducted in Dutch cities support the hypothesis of an increasing prevalence and preference of cocaine among heroin users in The Netherlands. Studies conducted in Amsterdam (8, 9) and in Rotterdam

and Utrecht (10) on selected subpopulations of heroin users (foreign origin, prostitutes) showed about a 60 % prevalence of cocaine use. A further study of cocaine use in Rotterdam confirmed a coprevalence of cocaine and heroin in various milieus, suggesting a high prevalence of cocaine use among heroin users in general (5). In the present study 96% of the research participants were using both heroin and cocaine. Cocaine seems to have become a drug of choice for many heroin users in The Netherlands. This is in contrast with the situation before 1982, when it was more or less seen as a frill, or a matter of secondary importance.

Like many other drugs, cocaine can be taken into the body in a number of ways. Via the mucous membranes of the stomach (swallowing), the nose (sniffing), or genitals (rubbing), by smoking or inhaling the fumes when heated and by injecting. Oral use of cocaine has a very mild effect and is for that reason hardly practiced. For that matter, during the first half of the 1980s, Peruvian mate de coca, or coca tea was sold over the counter in the U.S.A.. Each tea bag contained about five milligrams of cocaine. After publications in the scientific press, the tea was outlawed (11). Sniffing, absorbing cocaine hydrochloride through the nasal mucous membranes, seems to be the most common mode of administration in so called non deviant users (12).

To understand cocaine use among heroin users, one has to start off with a basic understanding of the ritualized patterns of heroin use. In The Netherlands, these patterns were subject to a subcultural development of 20 years, starting around 1972. Cocaine use may be conceived as being nested in these heroin taking rituals. These heroin rituals were, however, developed for heroin use and, as will be demonstrated in the following pages, were less appropriate for cocaine consumption. In the succeeding sections the effects of the nesting of cocaine in heroin self-administration rituals will be presented.

Cocaine Smoking

Preparing Cocaine Base

As crack (commercially fabricated cocaine base) is almost not available on the illegal drug markets in The Netherlands, cocaine smoking heroin users normally prepare the product themselves. In order to smoke cocaine, the Dutch user must first process the cocaine- hydrochloride he bought at a house address to its precursor base form. This seems preferable to the users as then they have more control over the product they will smoke. In order to prepare this home-made crack, one needs some additional tools and home chemicals, such as a spoon, some tissue or toilet paper and a base like aqueous ammonia or baking soda (sodium bicarbonate) and a little water. At many dealing places spoons, ammonia, tissue or toilet paper and water are supplied by the dealer as is aluminum foil to chase. The spoon is usually a teaspoon, often bent, so that when put down on a flat surface it stays steady and level. The ammonia or bicarbonate is used to separate the hydrochloride group from the cocaine base. The tissue or toilet paper is used to dry the cocaine base when processed. The knife is used to extract the base from the solution in the spoon.

Given the necessary equipment, the user is ready to start preparations. First the pakkie (wrapper) will be opened and with the tip of the knife an amount of the cocaine will be put into the spoon. Then the processing can start:

She cleans a tea spoon that lies in front of her, puts in the cocaine and adds a little ammonia. She heats the spoon with a lighter, but doesn't boil the content. Then she puts the spoon back on the table and picks up her knife, cleans it on her skirt and sticks it carefully into the cocaine and ammonia solution several times, meanwhile turning the knife so the depositing cocaine forms a lump around the top of the blade. Then she dries the lump, still on the blade, in a tissue and breaks it from the blade.

Most users prefer to use ammonia as this is the easiest and fastest mode. The ammonia comes in commercial household bottles containing 0.5 liter. A small hole is made in the cap to secure a careful dosing when dripping it in the spoon, preventing overflowing and wasting the substance. Other users prefer to use bicarbonate, mainly because they regard it as a safer means than ammonia, as the preference for

bicarbonate is generally explained in terms of the health consequences of inhaling ammonia vapors:

"Ammonia bites, salt cleanses."

"No never, it's too dangerous. You never know how much ammonia stays behind and how much you get in while smoking. That's why I always use maagzout (=bicarbonate)."

While bicarbonate is safer it requires a more skilled hand as it must be carefully dosed and takes slightly more time. Furthermore, not at all deal places (e.g. in some squatted houses) water is readily available. Some users have developed an idiosyncratic preparation ritual, like Henry, who likes to use both ammonia and bicarbonate:

With a knife Henry took out ± 1 stripe (0.10 g) of Cocaine and put it in a teaspoon. He then poured a little ammonia in the spoon and then he added a little salt. "Adding a little salt to the ammonia gives the best results, I think." ... He then boiled the solution firmly and it looked as if there was no base left over but when he took his knife and tipped the surface of the liquid the base cluttered to the knife-tip and formed a 'good' lump.

When ammonia is used, it is carefully dripped into the spoon. If bicarbonate is used, first a small amount ($\pm 1/3$ of the cocaine powder) of the powder is put in and next the spoon is filled with some water, often by dripping it off a finger.

Next the spoon is heated so the chemical reaction between the hydrochloride group and the base can take place. This is mostly done with a cigarette lighter. Sometimes a candle or a turpentine burner is used as the lighter can get very hot because it is on for a longer time than is necessary to light a cigarette. If these are used, it is by the dealer or the owner of the dealing place, as users do not carry these bulky paraphernalia around. Some users heat the solution until the base clusters into an oily drop, floating in the liquid, while others cook the solution firmly until the drop seemingly disappears. Then the user takes his knife and tips the drop or the surface of the solution carefully, often turning the blade of the knife each time. The cocaine

base then deposits on the tip of the blade, forming a lump. A small pocket knife is preferred, but any metal tool will suffice. By looking at the solution against the light some users check if any base is left in the spoon. When the lump has congealed most users dry it with a piece of tissue or toilet paper. At this point some users perform an extra action meant as a health precaution:

After the lump has formed on the knife ... he takes the knife with the lump and holds it close to the ground. Then he pours water from the lemonade bottle over the lump to rinse out the ammonia rests.

Other users rinse the base in a glass, while it is still on the knife tip or put the lump in a spoon with clean water and boil it again. Finally the lump is broken off the knife and ready to smoke.

Cocaine Smoking: Varieties of Vapor Inhalation

Cocaine can be smoked in various ways; in cigarettes or coke joints, from aluminum foil and based in specially designed or customized base pipes. As with heroin, the drug is not burned, but melted and vaporized. The vapors are inhaled.

A coke joint can be made in several ways. Often an ordinary cigarette is used. Some of the tobacco is taken out and the powdered cocaine is put in and shaken through the tobacco. In a hand rolled cigarette the cocaine is spread over the tobacco and then the cigarette is rolled. In this case it is sometimes mixed with marihuana or hashish. Sometimes cocaine hydrochloride is used. This is however, a very inefficient and expensive way of taking the drug, mostly done occasionally by sniffers, who are often not aware of the technique of preparing cocaine base. The effect does not differ very much from sniffing besides a little defeaning of the tongue and the, by many users appreciated, sweet caramel-like taste of the fumes (which may result from diluents). In fact, most of the cocaine decomposes into inactive components. This method is considered a waste by experienced cocaine smokers, such as heroin users. Although much more effective than smoking cocaine hydrochloride, smoking the base form in cigarettes still is a relatively moderate, inefficient and expensive way of ingestion. Within the heroin scene, this relatively rare cocaine smoking mode is more prevalent among novice cocaine smokers and among dealers who have a steady access to large quantities of the drug; among the sample of heroin users this was not observed. During the fieldwork a cocaine smoking middle-level heroin and

cocaine dealer was contacted who did not use heroin. He claimed that the coke joints he smoked contained up to 2 grams of cocaine. When smoking a coke joint, the cocaine base melts and tends to stick to the inside of the cigarette paper. Therefore, most users constantly moisten the cigarette paper to prevent the loss of fumes when not inhaling. This is also done when smoking heroin in cigarettes.

Chasing was the dominant route of ingestion for heroin in the research group and this was also the case for cocaine. Chasing heroin was practiced before cocaine entered the heroin scene and acted as a model for non injecting heroin users, who started using cocaine. Heroin users chase cocaine in a number of ways; pure, often alternated with heroin and mixed with heroin. There appears to be a functional relationship between cocaine and heroin for both smokers and IDUs that will be discussed in chapter seven. However, cocaine and heroin are also smoked together for directly observable instrumental reasons. It requires more skills to chase pure cocaine than heroin. In the following example from a fieldnote, both users smoke pure cocaine from aluminum foil:

The Surinamese man puts (the cocaine) on the foil and after heating it first to filter out the ammonia vapors he starts chasing. He says he does not need een kleurtje (a little color) to follow the liquid but he misses a lot of the cocaine base fumes. Boris (the dealer) also smokes the cocaine without heroin but he is doing better.

Cocaine is harder to chase for a number of reasons. It is colorless when liquid and therefore harder to follow. For that reason users often add a little heroin to the cocaine. This little amount of heroin is called een kleurtje which means a little color. It is meant to color the colorless cocaine base liquid which then becomes transparent light brown and easier to chase:

After he has smoked 2 chineesjes pure base ... he now adds heroin to it. He says he does it for het kleurtje but also to stay relaxed.

When chasing pure cocaine one also needs to dose the flame more carefully:

She heats the foil carefully so that the flame does not touch the foil.

This way the cocaine drop slowly runs over the foil.

When heated less cautiously, the liquid cocaine base has a very low cohesion and behaves very capriciously on the foil:

With his fingers he breaks the lump off the knife and puts some pieces on the foil. From his pocket he takes a tube and starts to chase the cocaine base. He follows the drug carefully on the foil. However, the cocaine follows a very whimsical trajectory on the foil. The drop splits up several times and when he stops heating the foil it spreads into a large spot. After exhaling he starts again but he first chases the offshoots of the spot to make it into one drop again.

Heroin is much more cohesive. Therefore it does not only tone the base, but it also produces a more cohesive mixture; it tames the white dragon and makes it easier to chase. The following example depicts that quality of heroin:

He puts some heroin on a foil and starts chasing. The heroin powder melts into a drop and then runs along the foil. In contrast with coke, the heroin drop stays very cohesive and runs smoothly and steady on the foil leaving a light brown track behind.

The rationale of these behaviors is confirmed by laboratory simulations of chasing. Most illicit heroin is much less volatile than cocaine base. Mixing the two substances decreases the volatility of cocaine, while increasing that of heroin (13).

Besides chasing cocaine, many users were observed basing cocaine. Basing is the most direct and efficient smoking mode, producing a rush (impact effect), comparable with, and according to some authors even more rapid and intense than injecting (14, 15, 16). Chasing is also efficient, but a much more moderate way of ingestion. When a certain amount of cocaine base is chased, it may take five to ten runs of the drug along the foil, depending on the (heating) technique. Each run accompanied by inhalation of the vaporized product through the tube. When the same amount of cocaine is based, the vaporized substance is ingested in one or two inhalations. Compared to chasing, basing does not only produce a more intense impact effect, it is also a very expensive mode of administration and for that reason, often reserved to dealers who have a much higher availability of the drug than the average user.

Apparently, when cocaine initially became available in the heroin scene, among the first users that started basing were Surinamese heroin dealers who, through their contacts and financial means, got easy access to cocaine in a time when it was relatively still very expensive. Basing cocaine became a status symbol in their specific scene at the time. After this initial phase, many heroin users, both smokers and IDUs were introduced to basing at Surinamese house addresses. Although in that period the prevalence of cocaine use among heroin users was much lower than nowadays, there was a high prevalence of basing among users who started using cocaine (7, 17). During the 1980s cocaine became more and more available and cheaper in the heroin scene. An increasing number of heroin users added cocaine to their drug taking repertoire. Somewhat simultaneously the prevalence of basing seems to have decreased, not meaning that users stopped basing cocaine altogether, but that they combine it with their preferred administration ritual (18, 19). Thus, IDUs will normally inject cocaine and sometimes they may base the drug. Likewise, chasers will generally smoke cocaine from aluminum foil and now and then base the drug.

However, during the fieldwork the prevalence of basing among chasers seemed to be rising -- a sudden increase in basing was witnessed at house addresses. In that period the prices of both heroin and cocaine were going down. Besides the price level and the stronger impact effect, group dynamics also seemed to play a role in this rapid rise. One user gave the following explanation for the observed wave of basing:

I'm smoking coke from the glass for about three weeks or so. It gives a much better bang than chasing the coke. Now many guys are smoking from the glass. It's a kind of fashion whim. About three weeks ago someone started to smoke from the glass and told others it gave a great kick. Others tried it too and that is how the ball started rolling.

Basing requires the same preparations as chasing. The difference is in the apparatus that is used in smoking; the cocaine base is put in a pipe:

Fred took the cocaine lumps and started smoking the base in a glass water bong. This bong is designed to smoke cannabis. It had a picture

of a cannabis shrub on it. ... Fred put a lump in the head of the pipe, put the mouth piece to his mouth and then heated the base, dosing the flame carefully. He first drew the pipe full of smoke and then he released the air hole and inhaled all the smoke. He repeated it until it was finished. He then sat back, closed his eyes and laid his head against the back of the sofa.

All kinds of self-constructed or commercial pipes like hashish pipes, water pipes designed to smoke hashish and freebase pipes (with or without water/liquor) are used to smoke pure cocaine base. Designer pipes, such as in the last example, are not common as they are expensive, bulky and fragile and therefore not easy to carry around. Specially prepared water glasses were most often observed:

Around a little table near the door are sitting two creole Surinamese males, one is smoking cocaine in a base pipe. One of the Dutch men, Fokkie, is smoking cocaine from a glass. The glass is covered with aluminum foil. In the foil are little holes and on the opposite side is a larger hole. First he puts some cigarette ash on the little holes, on the ash he puts some small cocaine base lumps. Jack says that the ash is put on the holes to prevent that the melting cocaine base falls through the holes in the foil. "Now the coke is absorbed by the ash." With his lips Fokkie covers the larger hole, lights the cocaine base and inhales the smoke. On the table stands another smoking glass and also one on the dealing table.

The glass does not necessarily have to be a water glass. Any jar of about the size of a water glass will do. The main requirement is that it must be possible to cover the opening with a piece of aluminum foil:

From the table he takes an empty jar. He fills it half with water from the lemonade bottle and puts aluminum foil over the top. He sets the foil with a rubber. With his knife he carefully makes tiny holes on one side of the foil and a bigger hole on the other side to put his mouth on, to smoke. From the ashtray he takes some ash and puts some of it over

the little holes. On top of it he puts the cocaine base, heats it with his lighter and smokes.

Subsequent observations in 1989, 1990 and 1991 have shown that cocaine basing has become increasingly important. Many users have turned to basing cocaine (mostly in little, self-constructed pipes), while maintaining heroin chasing.

As explained above, the smoking of cocaine in The Netherlands is generally limited to smoking home-made crack. Although no extra cuts or fillers will be added during self processing, this product still contains the impurities and cuts that were in the cocaine before processing it into the base (20). In addition it may hold some of the processing chemicals (bicarbonate or ammonia). This product is different from free-base, cocaine base of almost a 100 % purity. This purity is reached by refining the cocaine base of all cuts and processing residues in ether. Due to the superior purity the effect is even more potent. Because of the rather complicated and dangerous process (ether is a highly inflammable liquid) actual free-base is rarely smoked by heroin users in The Netherlands.

Cocaine Injecting

Cocaine hydrochloride dissolves in water without the necessity of additional chemicals or heating. To inject pure cocaine, one does not have to go through much preparation and the preparation requires the least technique and tools as can be seen in the following fieldnote:

While discussing Alex had peeled out some cotton threats out of the lining of his jacket. Between his fingers he rolled a little ball from it. From his pocket he took a spoon and a little package which contained cocaine. He put the coke in the spoon with a little water and stirred it. Next he put in the little ball which he used as a filter. He drew up the cocaine and took the shot.

Although it dissolves without heating, cocaine is usually prepared in the same cooker as heroin. The cocaine is mostly stirred into solution with the safety cap of the needle, sometimes with the knife that is used to put the drug in the spoon. Often cocaine is combined with heroin in what is called a cocktail:

Doug starts to prepare a cocktail of heroin and cocaine. He puts some heroin in the spoon and adds some lemon juice and water. Then he boils the contents with his disposable lighter. When the heroin has dissolved he puts the spoon back on the table and waits a few moments. Then he carefully puts his fingertip in the solution in the spoon; "it's okay now", he says, referring to the temperature of the solution. He holds the package with cocaine above the spoon and with a knife from the table he pushes the cocaine out of the package into the spoon. When most of it is in the spoon, Doug scratches the package with the knife, so the last cocaine falls in the spoon too. He then stirs the cocaine through the heroin solution with the plastic needle-protector from his syringe.

At first glance, the nesting of cocaine in the self-administration rituals typical for heroin users may not seem to make much difference. However, as will be demonstrated in the next sections, the addition of cocaine did, in fact, have a significant and often negative impact on many aspects of the lives of the research participants.

Varying Patterns of Cocaine/Heroin Use

A Comparison of the Effects of Heroin and Cocaine

Agar distinguishes four effects of an intravenous injection of heroin: (21)

1) The rush or flash is the initial physiological effect after the drug is injected into the body. It is sometimes compared to a driving force or an orgasm.

"It's a very warm feeling that starts in one place and spreads. Probably that's where the similarity with an orgasm begins and ends".

The intensity of the rush varies with the administered dose and tolerance.

2) The high is a feeling of general well-being and is longer lasting than the rush, the length of time varying with tolerance and dosage.

3) The nod is usually described as a state of unawareness varying from light (dropping eyelids and jaw) to heavy (unconsciousness). A higher dose of heroin relative to the tolerance is necessary to produce the latter state.

4) Feeling straight describes the state of not being sick, that is withdrawal symptoms are absent, without feeling the, as pleasantly described, high.

"I'm not high, I just took the sick off."

Ameliorating the withdrawal symptoms is one of the main goals of the low dose methadone maintenance prescription in The Netherlands. As opiates are dependence forming, a fifth effect, withdrawal --feeling sick, can be distinguished when the drug has worn off. In terms of behavioral pharmacology the first four effects are positive reinforcers, while the fifth is a negative reinforcer (22).

When chasing the rush is much less apparent. The drug effect is, compared to injecting, slowly and moderately built up to the desired level. An IDU administers a certain dose in one injection while a chaser spreads the ingestion of the same dose over a much larger time span. The high and the nod are not different from those experienced when the drug is injected. Although nodding is not unfamiliar to chasers, it occurs much less often than when the drug is injected. When chasers do smoke themselves into a nod, this results from a much more gradual and time consuming process. Because of this gradual build up, fatal overdosing is, apart from inclement circumstances, unlikely when chasing (see chapter ten).

Cocaine and heroin are quite different substances and have rather opposite effects. Heroin is a downer, a suppressant, while cocaine is an upper, a stimulant. So cocaine does not produce a nod. Nevertheless, "[a]lthough many of the subjective effects are different, euphoria is a property that opiates share with cocaine and amphetamine" (23). Just as heroin, cocaine delivers a rush and a high. The rush, the most intense of these, so called, positive reinforcement effects of cocaine is induced by injecting and basing Chasing produces a milder effect. Compared to these modes, sniffing hardly produces a rush. The cocaine rush is often valued higher than that of heroin and qualitatively different. Some users stated that the heroin rush is more physical and the cocaine rush more cognitive. Such explanations may, however, for a large part be idiosyncratic. The cocaine high is also qualitatively different than the heroin high. Heroin produces a feeling of satisfaction, a warm blanket. Cocaine is said to give a feeling of extreme alertness and a perception of increased power and coping skills (24, 25). Again caution must be emphasized, before generalizing such depictions, as the individual experience may vary considerably. While injecting and

smoking cocaine produces an intense euphoric rush and a subsequent high, these effects are extremely short in duration (\pm 5 to 20 minutes.) and, in particular in cases of chronic intoxication, often followed by a rebound or crash, an opposite state of intense dysphoria (26). Even heavy cocaine use does not seem to lead to intense physical dependence, as is established by chronic use of depressants, such as opiates, barbiturates, benzodiazepines and alcohol (23). It has, however, been questioned if the adverse state following discontinuation of (chronic/intense) cocaine use is solely attributable to psychological dependence. This crash may have a negative reinforcement effect (26).

Among the research participants, cocaine's extreme rush potential and the high are the main incentives for its use, but the drug's association with increased and persistent activity is likewise highly valued:

\pm 15 minutes after he took a shot, Richard pours in the tea, while Chris is busy with dustpan and brush in the hall. "We always clean up right after the coke, then you have the energy and the lust to do it.", says Richard.

Some users rely heavily on this effect; to them cocaine may become the most important source of vitality:

"A Surinam user told me he was sick, really sick as from heroin. If he hadn't been using coke he said to be feeling languid and weary. Taking white would pep him up he said, making him ready for the day."

Various Cocaine/Heroin Combinations within the Ritual of Preference

For both chasers and IDUs a variety of use patterns, involving taking cocaine pure or in different combinations with heroin, have developed. Whereas these patterns --turn taking (alternating doses of cocaine and heroin) or cocktailing (combining the two drugs in one dose)-- cannot be tight to specific individuals or groups, most users have developed a pattern of preference within one of the main administration rituals. Like Karel, who likes to shoot his cocaine pure, followed by an injection of heroin:

Karel is shooting up cocaine. He puts the coke in the spoon, stirs, pulls it up through a piece of cotton and shoots the coke without using a belt.

The rush makes him sweat very much. "It's an extreme flash it's very good coke.", he says, "I always first take the coke, cause I want to enjoy the coke-flash first." A little later I take the bruin.

Or this chaser, who likes to combine cocaine with heroin:

The customer first puts some heroin on the foil and on top of it he puts some cocaine. "I like to smoke it this way, it's pleasing me the most if I smoke them together".

However, most users do not have a fixed consumption pattern. One moment they turn take cocaine and heroin and another they use the drugs in a cocktail. It simply is not always possible to stick to preferred pattern. Obviously, the available money is a very important factor:

"When we have enough money we will buy 0.5 g cocaine and 'een kwart bruin' (=0.25 g heroin). That we put into one cocktail, so each has about a 'kwart wit en een streep bruin' (0.25 cocaine & 0.10 g heroin) per shot."

While other, primarily situational variables --such as the type and amount of the drugs already ingested (methadone), gifts, the time of day, available tools and physiological (habit size, withdrawal), psychological (mood or craving) and social factors (the present company and their objectives, motives, drives and expectancies)-- can also be seen to influence the patterns of use, the data suggests that availability (in terms of money and/or drugs) is a main factor.

Two Different Cocaine/Heroin Patterns

Closer examination of the data on the cocaine use patterns identified two cocaine/heroin patterns with an uneven distribution. In the most common, cocaine is used for pleasure and heroin --to curb cocaine's side effects (see chapter seven)-- in similar quantities. In the second, less common, pattern the use of heroin is maintained at a minimum level, while cocaine use is much higher. Both patterns are also evident in the study of Grapendaal and colleagues Although they reported that most of their respondents prefer to use similar quantities of both drugs, they found a monthly mean use of cocaine (14.6 grams) which doubled that of heroin (7.7 grams)

and attributed this to a few extreme users with monthly cocaine use maxima up to 140 grams (27).

The observations and conversations with cocaine users strongly suggest that the latter pattern is more prevalent among the minority of users who do better than average in their specific hustle --the successful shoplifter or burglar, the most popular or top-poes (top pussy) sex worker on the stroll, and, most typically, the steady house address dealer. Pat, a 35 - 40 years old dealer using drugs for about 20 years explained the relationship between his occupation and his drug use:

"I use about a gram of 'bruin' now and a gram of 'wit', but when I'm dealing I use much more cocaine."

Doorman Jack explained the relevant reasons for heroin's lagging behind:

"When you're a doorman on an address, you're using more 'wit' (cocaine), I do. I don't have to be sick then (a doorman rarely is, as he's being paid by the dealer to screen visitors). Using more heroin then isn't making sense, more heroin gives more tolerance. It also makes it harder to stay not sick all day when I don't have a job as doorman. And, you don't feel it anyway (more heroin), a doorman has to stay alert."

The higher prevalence of the second cocaine/heroin pattern (much cocaine, little heroin) among dealing users is thus for a large part explained by the different pharmacological properties of the drugs and the relation of this difference to drug dealing. When employed in a dealing team, both heroin and cocaine are readily available --though not unlimited as dealers dislike overindulgent employees--, but Jack restrains from ingesting large amounts of heroin. Well aware of the uncertain nature of his employment, he anticipates periods of unemployment in which drug availability is much lower. Thereby he prevents unpleasant withdrawal experiences or having to resort to money raising activities below his (ethical) standards (27, 28). Cocaine's superior status as a pleasure drug may also add to this choice. But, maybe even more important, the specifics of the dealing setting promote the increase of cocaine use. To prevent loss of control of the dealing process (mistakes in weighing and financial transactions, rip offs, police busts or any other interference of the

economic process) those involved in dealing must stay alert, perform their task accurately and constantly monitor the situation at the dealing place. This requires rather careful drug titration. In particular, too much heroin is contra-productive, as it decreases attention and results in reduced control over performance and the setting. In contrast, cocaine elevates alertness and is therefore tailored to the requirement of the job. As a result, cocaine use increases, generally both in quantity and frequency. Although both patterns may ultimately lead to some degree of cocaine related psycho-social problems, as described in the following section, the second pattern would especially seem to do so, as cocaine use is less compensated with heroin. Oddly enough, while the second pattern is more common among dealers and their total consumption is generally well above the average, they seemed to experience less problems. Cocaine related symptoms were not observed in stable dealers. In itself this seems a paradoxical finding, as it apparently contradicts the commonly held idea that psychological problems due to cocaine use are dose related (12, 29). It is a question, though, if this contradiction is real. Whereas dealing users may use considerably more cocaine, it does not mean that this is without limits or that they are not susceptible to cocaine related problems. This finding may thus merely mean that under the specific conditions of the dealing setting these users can consume more cocaine than their non dealing peers before experiencing these typical problems, and when such problems appear, they are apparently more successful in applying controlling procedures.

Consequences of Cocaine Use

Problems due to heavy cocaine use are well known among heroin users. Physicians in treatment and methadone maintenance programs are more frequently confronted with cocaine-related symptoms and some of them are prescribing antidepressants and tranquilizers (7). Problems range from loss of control and craving escalation, individual psycho-social complaints to the collective disturbance it has on the structure of social interactions. While the state of intense heroin intoxication (the nod) has positive value for a considerable number of users, this is not always the case with cocaine. Irritability, extreme sensitivity to external stimuli, paranoid and delusional thinking, formication (coke bugs), and other unpleasant effects have all been related with heavy cocaine use (12, 26). At the other hand, discontinuation of

use may lead to craving, tremor, muscle pain, eating disturbance, extreme nervousness, sleeplessness and social withdrawal, and rebound depression (26). As 96% of the research participants used both heroin and cocaine, almost all have experience with the negative sides of cocaine and it was a frequently mentioned subject. Many users furthermore report that quality of life has decreased since cocaine has entered the scene --mutual tolerance and support seem to decrease when cocaine is involved.

As explained above, when smoked or injected the desired effects of cocaine are highly intense but very short followed by an unpleasant rebound. To check or prevent this state and maintain the high, the drug is administered repeatedly over short time intervals. As a consequence of this practice, craving for cocaine can easily escalate:

"There I go again with that coke, I just took a shot. Often the needle is still in my arm and I'm in the flash. But already I'm thinking about the next shot. You're so busy with the next one that you ruin the flash you're in."

This can lead to the consumption of enormous quantities of the drug. To maintain the high and prevent the crash, users end up bingeing (a binge is a prolonged period of heavy use) on the drug in administration schedules of twenty minutes or less, until the cocaine is finished:

"In the period that I was sitting in my kitchen all day shooting cocaine, I found the cocaine high delicious. But, the crash I found horrible and I would experience this crash within 20 minutes. I was not using heroin in that period. Normally after a shot of cocaine, I would inject some heroin to avoid that jittery body feeling. But without the heroin, I just had to keep adding cocaine every, say, 17 minutes. Not so much to keep the high going but to stay one step ahead of the crash."

A binge is often heralded by a sudden rise in financial means, for example the result of some (mostly unplanned) criminal success. Such an event not only interferes with preceding comparably balanced use patterns, it may be the end of it (28) --a turning point in the career, ushering in a period of insatiable craving and resulting (extremely)

high use levels of cocaine and heroin. Maintaining such high use levels requires large amounts of money, in the study group normally generated through involvement in the lower echelons of drug dealing or high levels of criminal activities. Billy, one of the research participants, explained that in one of his periods of high cocaine use, he was making money daily by following the mailman, observing where he mailed check books. Subsequently he lifted the check books (each containing 20 checks with a maximum of '200.-) out of the mailbox with an ingenious gripper and sold them to his fence for '1500.- each. Often he would start the day with '4500.-, buy cocaine and inject until it was finished. Although he sometimes is arrested, Billy succeeded in making the large amounts of money he required for his cocaine use on a regular basis. Normally he worked with a partner and than they formed a dyad (see chapter nine).

A little later Billy's partner comes in. He lives at Billy's place and they make money and use together. He is 35 - 40 years old. He tells Billy has just been busted when stealing in into the Shell building. He clearly has respect for Billy's criminal skills. "Billy is a real crack, lots of guts, he just walks into every place. We make a lot of money, regularly we earn 5000 to 6000 guilders a week."

The opportunity to make such large amounts of money on a continual basis is, however, not evenly distributed. When engaged in heavy cocaine use without access to ample financial resources or when a profitable source suddenly dries up, many heroin users, who before exercised some degree of control over their use, lose all grip on their situation and get into problems in many different ways.

During a binge often decisions are made that probably otherwise would not have been taken. In the words of Arie: "Cocaine steals the brains out of your skull, you keep on going" Everything becomes subordinate to the goal of maintaining the cocaine high. A considerable number of users will even neglect their heroin habit. That this is not an unusual occurrence is implicated in the following comment of a dealer:

"Many times I've seen users being sick from withdrawal and having only three 'tientjes' ('30.-) left. But they still buy 'voor twintig wit en een tientje

bruin' (¡20.- cocaine, ¡10.- heroin). That's what they do when they are on coke."

Although they like the drug very much, not all users go that far:

"When ... I'm sick, I would always buy brown first. I just know, I need it not to get sick again later on the day. I'm not in a methadone program, so white is nice but it stays a matter of secondary importance. White is really a delicacy. But getting better in the morning (from withdrawal) is just like having a flash. Really, when I'm sick and take a shot, the flash from the heroin is nicer than a coke flash. One thing is sure to me; morning brown is the nicest shot you can experience on a day."

Not only are (weekly) benefits spent on cocaine before the day of remittance has ended, even the grey market value of methadone, has been affected. This widely dispensed heroin substitute is frequently sold below the price. Paco and Numa provided information on the price dynamics at the drug market at the Central Railway Station and the inflationary effects of cocaine:

Paco tells: "Normally you have to pay ¡2.50 (for one tablet of Rohypnol; a strong, short acting and therefore popular benzodiazepine), but when there is no one else around with ropies the price can go up to ¡3.50 or even ¡5.-. With methadone it's the same, normally it is ¡1.- per cc" Numa adds: "There are a lot of dumb people around here. When you come here on a Friday everybody is selling methadone (the weekend doses). There is so much around then that some of them can't get rid of it, they can't find buyers. So they're lowering the price, some will sell it for 50 cents or even less. They should wait until Sunday, then they can make much more out of it. Sunday is always a special day: dealers are not at home or won't open the door, and a lot of users don't have enough money left to buy dope. And it's hard to get methadone on a Sunday, especially here on the C.S." Paco replies: "you know how they are, they can't wait. Especially when they are on coke, they need money, fast and now."

During the field work users were often followed on their daily rounds. The day the following fieldnote was recorded Richard and Chris, two older IDUs were accompanied. They were contacted at the Central Station, where they were trying to sell their methadone. Their behavior was a strong confirmation of the account of Paco and Numa:

Richard tells: "The methadone program allows us 10 days off in one year. Today we both took 2 days off, Thursday and Friday. And so we could also take the weekend doses with us. I have a daily dose of 20 cc and Chris gets 35 cc. Today we both got for 4 days, which makes a total of 220 cc, we are trying to sell now. We are trying for a half an hour now, but we still haven't found a soul that's interested in it." Chris says: "I Can't find no one either. Only some girl, but she wanted 100 cc for ₧50,=. I first want to look further." Half an hour later Richard finds a customer. He first wants to buy 25 cc for ₧25.-, but Richard offers him 55 cc for ₧35.-. Richard says: "But wait a second, I have to ask my friend, we're together in this you know." He walks towards Chris who is still searching for buyers. Chris agrees. Richard continues: "We make ₧35.-. Than we can buy '2 streep wit en 1 streep bruin'(0.2 gram cocaine and 0.1 gram heroin). The rest we can pay in methadone at the dealer." Chris replies: "Okay with me, but lets go now, this takes so long and I really need a hit now."

When they sold their methadone, they rushed to a house address, bought the drugs, went home and shot a cocktail. The consequence of being without methadone the coming three days did not seem to bother them much.

Impaired judgment may lead to overestimation of criminal skills and indifference over the consequences of ones actions, as long as it generates more cocaine:

"I was sentenced for a burglary, they caught me on the spot. It was because of the coke. The day before I made a lot of money. First, I bought some clothes for ₧700.- and gave my mother ₧300.- to have the television repaired. The rest I gave to her to keep it save for me. But that day I went on going to her, each time asking for ₧100.-. I don't know

exactly how many times I went, but the last time was about two a clock in the morning She got very angry at me and told me to take all the money. That night I spent ;1100.- on dope, mostly cocaine. When I ran out of money I still wanted more and decided to go out to get money. I wasn't sick or so, I just wanted more coke. The people at the place I was tried to stop me from going, but I would not listen. I just wanted more."

In this case, the arrest meant the end of the cocaine binge. Although during the fieldwork only few cases of violent behavior could be established, several violence stories associated with out-of-control cocaine use were recorded.

Jerry tells about a guy who went crazy through his excessive cocaine use. "He started to demolish the room downstairs and also broke a window. He just wanted more cocaine."

Normally these outburst were directed at other community members:

Last week Footy tried to rip me off my money. He first tried to borrow ;25.- of me. I told him I did not have money. Then he started to threat me, he took the sword I keep as an ornament and put it on my breast. He wanted me to empty my pockets. I did not do it, we went into a struggle and I took the sword from him. I threw this table to him and then he backed off."

Intensive cocaine use can render the user overly sensitive to external stimuli, especially sound:

The Surinamese user ... stands up and says: "My head. My ears are singing" This happens after he's been smoking (cocaine from the glass) for 15 minutes. He says he has to leave and goes out on the street.

This sensitivity can lead to social withdrawal. Some users, particularly IDUs, can not stand others around when taking cocaine and therefore isolate themselves. One IDU told that when shooting cocaine, he retreats himself into the shed behind his parents

house, puts wadding in his ears and a towel over his eyes. If not, his rush would be ruined. For an outsider such events may not look pleasurable and even for insiders such behavior can be startling, but as the comment in the next fieldnote indicates, there is clearly some entertainment value in the act:

"Lately we had somebody here who was only shooting coke, about 1 gram a day. When he had taken a shot, he used to lay down and wanted everybody to be quiet. His eyes would turn in his head and his arms and legs would swing wildly in the air, shaking his body. He looked 'para', but he seemed to enjoy his shot. As soon as the shot was worked out he would take another one, over and over."

In a minority of cases, when users involved in intensive cocaine use are disturbed in their rush they may turn aggressive.

Paranoid thinking is often associated with heavy cocaine use. The relation between cocaine and paranoia has been clinically known ever since cocaine became widely used (3). Paranoia and related phenomena like restlessness and anxiety are indeed well known as consequences of heavy cocaine use in the Rotterdam heroin scene. Users talk a lot about paranoia and relate it to the use of cocaine:

Mover [has smoked cocaine and heroin. He]... is very speedy, talks fast and loud, sweat on his face. Nadir bends over to his neighbor saying: "you see how para he is, it's the cocaine".

Prior to the following fieldnote, Ria had just taken an injection of cocaine:

Ria comes down to the first floor and starts searching in a plastic bag which is filled with garbage. Gus (her boyfriend) tells her to stop with what she's doing but she continues searching. She goes on for about 10 minutes and finally comes up with some old stamp bags (which had contained drugs). she shouts at Gus; it seems to have something to do with the bags. "Stop it Ria", Gus shouts back, "you're talking nonsense, it's just paranoia!" A few minutes later upstairs, Ria is having a nervous breakdown, she is crying heavily. "I can't stand it any longer", she's

crying, "Can't you see I need rest. Tell them all to go, Gus, I want them out."

As they frequently give dealers the opportunity to sell drugs, it is often very crowded in the house of Ria and Gus and they hardly have any privacy. Moreover, because of the dealing, there is always a risk of police busts, which results in a continuous tension.

Another psychological cocaine-related problem, frequently mentioned in the literature, is depression (14). Both field and clinical observations have shown that after periods of heavy use of cocaine, users may often get depressed (12, 26). Harrie, a 40 year old native Dutch drug user who has been shooting up for about 20 years is a case in point. Over the last years Harrie has used methadone, heroin and primarily amphetamines. During the fieldwork period, Harrie started dealing heroin and cocaine. He left the methadone maintenance program and stopped taking speed. Instead he began shooting cocktails of heroin and cocaine. The first months this went fine; he earned more than enough to support his habit, even to pay a dealing team, and began to live with a woman. But later Harrie started having problems. He was robbed twice, which was stressful, and felt forced to hire bodyguards which were expensive. The begging and wheedling of customers brought additional stress. About a month prior he ran short of money and had to stop dealing. Shortly after that, his girlfriend left. Attempting to feel better he continued binging on large amounts of cocaine but grew more and more depressed. He talked about suicide and feeling down. The following fieldnote documents the cocaine related depression Harrie fell into at the end of his binge:

Harrie is sitting in the corner in a car seat. His face looks very sad and his eyes are wet although he is not crying. He says he called because he doesn't see any perspective anymore. He is not able to make any distinction between his problems and can't say what exactly bothers him. He says everybody has let him down and he would like to commit suicide, but does not dare. When asked what he wants to do about his situation he says he does not know, "what difference does it make. It all seems one black hole." He has not eaten for days but refuses offers of food, saying a shot of cocaine would make him feel better. He asks and

almost begs several times for money to get some coke, but does not think that cocaine is a part of his problem. He feels left alone and thinks he's so down because his relation broke up.

Clearly Harrie is unable to make sense of his condition or distinguish the ingredients of the process that left him in his present state. Deprivation of food (and obviously sleep) have taken their toll. But, most of all, his complete fixation on cocaine --in his perception the drug was not part of the problem, but the one and only solution-- prevented him from making any rational assessment.

It has also been demonstrated that cocaine has a disturbing effect on sleeping patterns (26). In this context, the use of benzodiazepines and other pills has been reevaluated in the heroin scene. Before the increase in cocaine use, benzodiazepines and other pills were mainly used by a low status minority, nicknamed pill freaks. Nowadays, many users take benzodiazepines to control negative side-effects of cocaine, such as disturbed sleeping patterns:

"I'm having sleeping problems, that's why I use Rohypnol and Valium, so I can sleep."

Besides sleeplessness, these prescription drugs are used to decrease restlessness produced by cocaine. Prior to the next excerpt the user has just injected a cocktail of cocaine and heroin:

"I've got to walk, I'm 'speedy' and by the way I can get some pills somewhere."

In the Central Station survey 59 % of the sample used benzodiazepines. Apart from cocaine related self medication applications, benzodiazepines, e.g. rophies (rohypnols) and other pills are taken to substitute, supplement or potentiate the effect of other drugs. The stereotypical staggering junkie is often the product of the use of large doses of pills. A considerable number of users take pills to ameliorate withdrawal when they cannot get heroin:

Achmed tells he's sick and asks Nadir if he got something for him. He explains: "Friday (today it is saturday) I sold all my weekend methadone

to buy heroin. But now I've got nothing I took a Rohypnol, it keeps you easy for a couple of hours. But it doesn't take away the withdrawal symptoms".

The combination of benzodiazepines with other drugs, alcohol in particular, gives a high some users appreciate, but can also produce unexpected effects and subsequent amnesia. Therefore many users feel ambivalent about their use:

Achmed tells that the effect of the rohypnol is waning off. "It helps a little, but I don't like to use it at all, it's bull shit. I always call it 'de vergeetpil' (the forget-pill). I'll tell you what it did to my brother. Once he came home and was totally upset, like a mad man. He had used rohypnol and alcohol. A fight came up. He fought with my father and me. He made a mess. The next morning when he woke up he asked me what had happened. He didn't know anything about it, couldn't remember a thing. He was very ashamed. That's why I call it a vergeetpil."

The combination with opiates may lead, depending on the doses, to an unexpected nod or even overdose, especially when benzodiazepines are not regularly used:

Harrie was very upset about the 'rip-off' and took two 'ropies'. Normally he never does. From the ropies he got relaxed. But some time later he took a shot and through the combination with the pills he went out (into a deep nod).

Transitions between administration rituals --in a considerable number of cases related to cocaine use-- will be addressed in chapter six.

Conclusions

In contrast with some years ago, when cocaine was incidentally used by a minority of heroin users, cocaine now seems to have become the underlying motor of the former heroin scene. The results presented in this chapter indicate that rituals, developed for the use of heroin, which effects last about four to six hours, are not instantly adaptive for cocaine use, as this substance forces users in administration schedules of twenty

minutes or less. Because of the short lasting effects and the subsequent high frequency administration schedules, the perceived availability of the drug is for most users much lower than that of heroin (although the drug may be just as easy to purchase), provoking increased drug craving and thus higher drug use levels. The cocaine use patterns of the heroin users in this study result in a deep paradox of pleasure and pain. While most users are fully aware of cocaine's paradoxical qualities, only few are able to withstand the seduction of the intense high cocaine delivers. In that respect, binging on cocaine has some points in common with a crusade. Blind for the negative consequences, the binger resembles a food and sleep deprived hallucinating crusader, who is mesmerized by a vision of (artificial) paradise, that, when rushing on coke, is so intense it almost becomes tangible. Intensive use, however, not infrequently entails tremendous sacrifices. It is therefore not surprising that users often describe cocaine in lyrical or religious as well as derogatory terms (27).

However, Grapendaal et al. recently wrote that "users can consciously choose to (temporarily) quit the use of cocaine" (27). Although their respondents displayed a fearful respect for cocaine and refer to the substance in terms as "insatiable appetite", "bottomless pit", "never enough", "forbidden fruit" and "... absolutely no brakes on this stuff", these authors conclude that "any compulsion due to the composition of the substance is ... out of the question. One uses cocaine as long as certain rewards are connected to its use and use is functional in a certain lifestyle. Use ceases as soon as the (figurative) costs outweigh the benefits" (27). While some users indeed seem able to stop the use of cocaine at will, such a bold conclusion does not seem justified by the data they present. As this chapter makes clear, a considerable number of users go to any lengths using cocaine and persist far beyond the point a rational cost benefit analysis allows. Some users renounce cocaine only after having paid a considerable price in terms of economical, social, psychological and legal costs. Not surprisingly, periods of intense cocaine use often end with arrest and incarceration.

For some, such experiences or those of friends are an incentive to (further) abstain from cocaine:

Petra says: "Not for me, I never use coke, I never did and I will never start to do so. I have seen enough of that shit".

However, many users do not succeed to abstain from cocaine use and regularly experience some degree of the in this chapter described problems. In order to prevent or minimize these problems most users have developed cocaine/heroin patterns that, besides satisfying the craving for the high cocaine provides, also aim to control its adverse effects. This is an indication of some degree of adaptation. Chapter seven will discuss these patterns and explore the determinants that moderate their effectiveness.

At this point it can, however, be concluded that in this population control over cocaine is still far from perfect. Rituals and rules developed for heroin use can apparently only slowly be adapted to cocaine. The, compared to heroin, low perceived availability of cocaine complicates this process to a large degree. With the nesting of cocaine in heroin rituals, the homeostasis and normalization of the heroin user has been severely disturbed.

References

1. Kort M de: De problematisering van het druggebruik in Nederland 1850-1940. Unpublished Masters thesis. Rotterdam: Maatschappijgeschiedenis, Erasmus Universiteit Rotterdam, 1988.
2. Korf DJ, Kort M de: NV de witte waan, de geschiedenis van de Nederlandse Cocainefabriek. NRC Handelsblad, Zaterdag Bijvoegsel, 13-05-1989.
3. Joël E, Fränkel F: Der Cocainismus: Ein Beitrag zur Geschichte und Psychopathologie der Rauschgifte. Berlin: Springer Verlag, 1924.
4. Epen JH van: Wat doen mensen met mensen? In: Heroïneverstrekking als alternatief voor behandeling: Verslag van een tweedaagse conferentie. Amsterdam: SKS, 1977: 4-8.
5. Avico V, Kaplan CD, Korczak D, Meter K van: Cocaine epidemiology in three European Community Cities: A pilot study using a snowball sampling methodology. Rotterdam: Addiction Research Institute, Erasmus University Rotterdam, 1988.
6. Buning EC: De GG&GD en het drugprobleem in cijfers deel IV. Amsterdam: GG&GD Amsterdam, 1990.
7. Kaplan CD, Tappin CP, Thuyns H: Cocaine and sociocultural groups in the Netherlands. In: Kozel NJ (ed.): Epidemiology of drug abuse: Research, clinical and social perspectives. Rockville: NIDA, 1985: IV 5-16.
8. Korf DJ, Poppel PWJ van: Heroïnetoerisme: Veldonderzoek naar het gebruik van harddrugs onder buitenlanders in Amsterdam. Amsterdam: Stadsdrukkerij van Amsterdam, 1986.

9. Korf DJ: Heroïne-toerisme II: Resultaten van een veldonderzoek onder 382 buitenlandse dagelijkse opiaatgebruikers in Amsterdam. Amsterdam: ISG, Universiteit van Amsterdam, 1987.
10. Kaplan CD, Korf D, Sterk C: Temporal and social contexts of heroin-using populations: An illustration of the snowball sampling technique. *Journal of Nervous and Mental disease* 1987; 175(9): 566-574.
11. Siegel RK: *Intoxication: life in pursuit of artificial paradise*. New York: Pocket books, 1990.
12. Cohen P: *Cocaine use in Amsterdam in non-deviant subcultures*. Amsterdam: University of Amsterdam, 1989.
13. Huizer H: Analytical studies on illicit heroin V. Efficacy of volatilization during heroin smoking *Pharm Weekbl [Sci]* 1987; 9: 203-211.
14. Gawin FH, Kleber HD: Abstinence symptomatology and psychiatric diagnosis among cocaine abusers. *Archives of general psychiatry* 1986; 43: 107-113.
15. Wallace BC: Treating crack cocaine dependence: The critical role of relapse prevention. *Journal of Psychoactive Drugs* 1990; 22(2): 149-158.
16. Washton AM, Stone-Washton N: Abstinence and relapse in outpatient cocaine addicts. *Journal of Psychoactive Drugs*, 1990; 22(2): 135-147.
17. Kaplan CD, Janse HJ & Thuyns H: Heroin smoking in the Netherlands, In: *Drug abuse trends and research issues, Community Epidemiology Work Group Proceedings*. Rockville: NIDA, 1986: III-35-45.
18. Korf DJ, Hogenhout HPH: *Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drughulpverlening* Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
19. Korf DJ, Aalderen H van, Hogenhout HPH, Sandwijk JP: *Gooise Geneugten: Legaal en illegaal drugsgebruik (in de regio)*. Amsterdam: SPCP Amsterdam, 1990.
20. Inciardi JA: Beyond cocaine: Basuco, crack, and other cocaine products. *Contemporary Drug Problems* 1987; fall:461-492.
21. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 137-148.
22. Wise RA: Neural mechanisms of the reinforcing action of cocaine. In: Grabowski (ed.): *Cocaine: pharmacology, effects, and treatment of abuse*. NIDA research monograph 50. Rockville Maryland: NIDA, 1984: 15-33.
23. Jasinski DR: Assessment of the dependence liability of opiates and sedative hypnotics. In: Goldberg L, Hoffmeister F (eds.): *Psychic dependence: definition, assessment in animals and man, theoretical and clinical implications*. New York: Springer-Verlag, 1973: 39-53.
24. Johanson CE: Assessment of the dependence potential of cocaine in animals. In: Grabowski (ed.): *Cocaine: pharmacology, effects, and treatment of abuse*. NIDA research monograph 50. Rockville Maryland: NIDA, 1984: 54-71.
25. Fischman MW: The behavioral pharmacology of cocaine in humans. In: Grabowski (ed.): *Cocaine: pharmacology, effects, and treatment of abuse*. NIDA research monograph 50. Rockville Maryland: NIDA, 1984: 72-91.
26. Jones RT: The pharmacology of cocaine. In: Grabowski (ed.): *Cocaine: pharmacology, effects, and treatment of abuse*. NIDA research monograph 50. Rockville Maryland: NIDA, 1984: 34-53.
27. Grapendaal M, Leuw E, Nelen JM: *De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan*. Arnhem: Gouda Quint, 1991.

28. Faupel CE: Drug availability, life structure and situational ethics of heroin addicts. *Urban Life* 1987; 15(3,4):395-419.
29. Shaffer HJ, Jones SB: *Quitting cocaine: The struggle against impulse*. Lexington, Mass.: Lexington Books, 1989.

TRANSITIONS BETWEEN RITUALS OF ADMINISTRATION

Contents

Transitions from Smoking to Injecting

Transitions from Injecting to Smoking

Conclusion

References

Most research participants either chased or injected their drugs. In general, these drug administration rituals were rather stable. As explained in the previous chapter, cocaine basing may well be increasing among chasers. But in the great majority of observations it was accompanied by chasing heroin, while cocaine chasing remained a common mode as well. Transitions from chasing to injecting and vice versa were also observed. In the following, these cases will be presented.

Transitions from Smoking to Injecting

During the fieldwork some research participants seemed in a transition phase from chasing to injecting. In this period they seemingly spent more time with IDUs and some tried to hide the fact that they injected for (non-injecting) peers. Freek, the subject in the following fieldnote, had been chasing for five years. He told that recently he started dealing to finance his habit. He was observed in a house where many IDUs live. It is one of the few house addresses where injecting is allowed and the house was visited by large numbers of both chasers and IDUs. At the time of observation he was not dealing, which may explain his transition to injecting in terms of drug availability:

A little later Freek wanted to shoot up. He asked everybody to soften their conversation. "I need a little rest around, otherwise I can't fix up and I don't want all the clients to see me shooting up." He said. "I didn't know you are shooting." Ronald asked "I thought you only chased your dope?" "I do both." Freek replied.

Freek asked for some silence so that he could concentrate on injecting. Apparently this was not a routine procedure. Lacking skills and experience, injecting was a stressful activity, as the rest of the observation shows:

Freek tied an electric wire around his right arm and searched for a vein. With his forefinger he tensely palpated his skin. It took him some time to locate a suitable vein. More than once he took up the syringe but hesitated and put it back on the table again. He changed the wire to his other arm and repeated the procedure. Then he found a good spot and inserted the needle.

In the next observation neophyte arousal is also evident:

Abdul asks Mohammed if he wants to help him setting the shot. Mohammed only wants to help him binding off his arm and finding a suitable vein. Abdul tells that this is maybe the tenth time he takes a shot, "I'm not so good at it yet". After pricking 5 times he manages to get into a vein. They are both pretty excited. Mohammed from the cocktail (he had already injected) and Abdul from the attempt to shoot, and they start to quarrel. Mohammed says he shoots much longer (about 6 months) and so he knows what he's talking about and knows how to do it best.

The transition from chasing to injecting is made for a variety of obvious and less obvious reasons --often in combination. Some chasers only smoke heroin combined with cocaine because they dislike the taste of heroin alone:

"I'm out of cocaine and I don't like to chase the heroin pure. I can't stand the taste, it's so dirty."

This man, a long time user who stopped injecting because he ran out of accessible veins, sniffs his heroin when he does not have cocaine available. A strong dislike of the heroin taste may be a reason to initiate injecting:

"I did chase when I started to use. But now I'm shooting. When chasing I had to throw up all the time. Almost every time I did it I got sick. It was quite an experience, shooting the first time, getting stoned without throwing up."

Other users need to hide their drug use, for example for their family. Chasing takes them too much time, which makes it harder to cover their use:

"Because I don't want my family to know about my heroin use, I can't use in the living-room. I always used the attic to chase the dragon. But it took me half an hour or more until I had smoked enough and could go down again. That made my family wondering what I was doing up there; what took me so long. Therefore I started shooting and now I can do it in 5 minutes."

Cocaine

Several statements of users and a considerable number of observations point at cocaine as a significant factor in the transition to injecting. The main reasons for initiating injecting, mentioned in this study were the faster and more intense effect. These reasons would apply to cocaine as well as heroin, but when explanations were given these generally referred to cocaine --Novice IDUs prefer shooting cocaine, above chasing or basing, because of the extreme 'flash' (rush). "Waugh, this is much better than smoking. Now you feel the flash right away", explained a user moments after he injected a cocktail. And another user explained: "Much better than the base-flash, it's the highest high you can get."

Frequently chasers start shooting cocaine, while continuing heroin smoking:

Billy asks Dirk what he wants. "Let's do coke first and then a cocktail", Dirk replies. ... Both shoot up without using a belt. Billy in the inner left arm. His arm is covered with needle-tracks. Dirk is shooting in his right arm. He has very little marks on his arm. When he is finished he takes the role of tinfoil that lies on the table, tears off a piece (\pm 15 by 7 cm.), heats it first, puts some heroin on it and starts chasing. "I'm only shooting now and then", he says, "strictly speaking I am a chaser."

Besides the intensified effects of (cocaine) injecting, the use of other drugs, in particular benzodiazepines may also play a role, as these can undermine internalized inhibitions. In the following excerpt Doug explains why he initiated injecting:

"You know me, have you ever see me shooting up, no never. Maybe some years ago I've tried it several times, but normally I always smoke dope. Now since 2 weeks or so I started shooting cocaine. This cocaine is so good, so after the first time I was sold off to it. It happened like this: I took a few, maybe three, Rohypnols. A friend of mine was here too, he said: "Hey man, try this (shooting), it's good cocaine". Doug continues: "Normally I wouldn't do it and keep refusing. But now, through the Ropies, I crossed the line."

In Doug's case the cocaine rush reinforces continuation of needle use despite negative information and knowledge. Other reasons for switching to injection include the high costs of chasing and basing cocaine. Paco, a ± 30 years old Moroccan user states:

"I am shooting mostly, sometimes I chase. I learned it from another Moroccan. I shoot every day, sometimes one a day, sometimes 10 a day when I have enough money or dope, especially cocaine. Cocaine I always shoot. Basing is too expensive and it takes too long. When you shoot you feel the flash right away."

Cultural Barriers to Injecting

Table 6.1 presents the administration rituals for the different ethnic groups in the study. The table indicates that the prevalence of injecting among minority drug users is very low. Other Dutch studies found similar distributions (1). During the fieldwork only one Surinamese male was observed injecting in a group of white Dutch IDUs. Injecting in Surinamese groups was not observed. Injecting drug use is highly disapproved of in the Surinamese community. Therefore, Surinamese users will normally conceal their injecting drug use, which may result in an underestimation of actual injecting prevalence.

Table 6.1

Although such disapproval may be less strong among Moroccan users, injecting Moroccans will normally also hide their injection drug use for non injecting peers. Prior to the observation of the two novice Moroccan IDUs (Abdul and Mohammed) presented above, these young men picked up 2 new syringes in the shelter next to the Central Station, but first one of them went in to look if there were no acquaintances or other Moroccans in the shelter. He explained: "I don't want them to know I'm shooting, but we were lucky as there was no one in." The reasons for not injecting among minority users may often seem rather idiosyncratic. Such as Shaffy's --a 22 years old Moroccan:

"Although I was always with friends who were shooting, I never started. I tell you why. Three years ago I had to do some blood tests at the CAD (methadone program). I went into the doctors room, but had to wait because the woman was still busy taking blood from another. So I could watch her doing it. And man, she really made a mess from it. As if she did it for the first time. She was really stirring the needle in his arm to find a vein. The man was hurt by her for minutes. I first wanted to leave, but it was my turn already. She messed me up as well and it really hurt me. This cured me from the lust to shoot for ever. And then, shooting up is bad for the veins."

Such accounts may, however, well be expressions of specific socio-cultural inhibitions. Nadir, one of the Moroccan key respondents explained the low prevalence of injecting drug use among his compatriots in terms of religious blood taboos:*

The majority of the Moroccans are not acquainted with the shooting ritual and its paraphernalia. If they have ever seen a syringe, it was at a doctor's practice. Many of the Moroccan users come from Berber or other rural areas, where experience with doctors is rare. The doctor and his symbolic instrument --the syringe-- are fearfully respected.

This may well be a folk religion interpretation of the islamic (and Jewish) taboo on the consumption of blood --exemplified in the practice of ritual slaughter in which animals

are bled dry before further processing (2). In the described Berber version of 'popular Islam' the scope of this basic rule of conduct seems thus extended to medical syringe use, perhaps encouraged by rivaling traditional healers. Imported by Berber immigrants and adapted to the situational requirements of the drug scene this taboo may well function as a cultural threshold for injecting, as was explicitly suggested by Nadir:

"According to this 'blood myth', evil spirits are attracted to blood and the devil has power over the blood. In Morocco this belief is so deeply rooted, that some people fear and might even try to escape from a doctor or hospital injection. In The Netherlands these Moroccans hear that injecting drugs produces all kind of diseases. To them, this is proof that the devil has been involved through the blood."

Van Gelder and Sijtsma also pointed at the religious meaning of blood as a reason for the Moroccan aversion of injecting (3). Mindful of Nadir's account, the following conversation between two Moroccan users was witnessed later during the fieldwork:

"Why don't you start shooting?". The boy replies, his face looking ugly:
"Shoot- ing? That's filthy, very filthy. I will have nothing to do with it. You know on some addresses you find for instance an ashtray full with blood. Bah, it makes me feel sick, even when I talk about it now. I don't want to have anything to do with blood, I stay away from it as much as I can. You get diseases from it, you heard what's happening with AIDS. I will never start shooting, it's dangerous."

Surinamese users are also believed to maintain a taboo on injecting which, supposedly, is rooted in 'Winti' --a popular Creole folk religion (4). This study established some support for this assumption. At one of the frequently visited places where a group of older white Dutch IDUs lived, one day Sheep, a 35 - 40 years old Creole Surinamese man had moved in. Although all other residents and many of the visitors were IDUs, and while almost at any moment there was somebody injecting, Sheep restricted himself to smoking. A few times he was observed making disapproving remarks to people injecting. "I'm proud of my body.", he explained his

aversion for injecting. Although the other Surinamese ethnic groups (Hindustani, Chinese, Javanese) may not share the Winti religion, the taboo on injecting is often shared.

In spite of such assumed protective cultural factors an increasing number of Moroccans and Surinamese do start injecting, which, according to users themselves, seems mainly associated with cocaine use. A trend already signalled by van Gelder and Sijtsma (4). During a visit to a dealing address the following discussion was observed after Lottie, a Surinamese female dealer had just served two white Dutch IDUs:

When the IDUs are gone Lottie says: "Shooters, always in a hurry." ...

The other Surinam woman says: "it's a matter of how you take care of your body, I simply want no spike in my body, I hate it. You know, people start to shoot when they feel they don't get enough out of chasing anymore. But "we Surinam people" don't like spikes in our bodies." Lottie says: "That isn't the case anymore. More and more Surinam users start to shoot, they go for the coke flash. This happens more and more. I don't want to have anything to do with shooters or 'pill freaks'."

For a considerable number of Moroccan users, some additional factors may further reinforce the initiation of injecting. These users have problems complying with Islam standards or family and community obligations and are for that reason thrown out of the house and ostracized by the community. Often homeless they gather around the central station and in shelters for homeless men. There they have more contact with native Dutch users and especially with older IDUs. Diffusion of the injection ritual may have started with these contacts. In addition to contacts with Dutch IDUs, diffusion of injection has occurred through contacts with groups of Moroccan users who travel from countries where heroin injection is the dominant administration ritual, such as France and Belgium.

Transitions from Injecting to Smoking

Transitions can also be observed in the other direction. For example, some users stopped injecting because they tried to regain control over their drug use and their life

in general. Another user ceased injecting in prison. After he was released he started using heroin again, but this time he smoked. Social pressure seems an important factor. One IDU, started working as doorman with a group of smoking users, who did not want him to inject:

"I stopped shooting up two days ago", he tells, "cause it is better for me. It's not easy but they're helping me very good. I quit kinda radically ..."

Three weeks later he was out of work again:

"I'm shooting up again", he says, "I'm also chasing, but now that I don't work anymore, I use less dope and that's why I shoot it."

It seems that both economic considerations and group rules (peer group pressure) influence the mode of administration.

Harrie, the older IDU mentioned before, also tried to stop injecting. He had multiple reasons. Observing him, it became clear that he had a hard time finding a vein. Often he was bleeding from all limbs when he finally got off. After more than 20 years of injecting there were few accessible veins left. Furthermore, his new girlfriend was opposed to his injecting. Last but not least, injecting cocaine became hard to control. This seemed a major reason for Harrie:

"For a couple of days I started to smoke cocaine (from aluminum foil). I find it more cozier, more relaxed. And I feel I'm more in control too, when I'm shooting I keep on going on. One after the other."

Although he really tried, Harrie was not able to stop injecting permanently. For about a month he actually injected much less and during this period his veins got some rest and became more accessible again when he tried to inject.

Difficulties with injecting is a common problem among longtime IDUs. Due to a history of poor and unhygienic injection technique, most veins have collapsed, are covered with scar tissue and have become inaccessible:

He ties off his right arm above the elbow. He tries four spots before he hits a vein. The first spot is on his inside of the underarm, somewhere in

the middle between hand and elbow. He moves the spike around under the skin, digging for a vein. Blood drips on the carpet. A second attempt is made somewhat closer to the elbow and a third on elbow height. Both fail. The fourth attempt --just above the elbow-- is successful. "Well finally, I am having more and more troubles with my veins." He pushes only half of the contents in the vein and boots three times, while the solution in the barrel gets bloodier. Then he empties the barrel. When he boots again, he looses the vein. He digs around, manages to get the needle back in and boots again. Again he looses the vein and tries to get it back in, but in vain. Finally he stops and takes the needle out of his arm. He has been busy for four minutes.

Some IDUs were observed digging in their arms and legs for periods up to two hours. Often they try one site after the other without loosening the tourniquet, so that they bleed from many wounds. Despite the pain, stress and 'blown shots', most of these older IDUs postpone stopping until all their veins are gone. Prior to this moment they often initiate chasing as a secondary route --when injecting fails, or to temper arousal and improve concentration in advance of an attempt to inject. But sooner or later they are confronted with the inevitable choice, as becomes clear from Patrick's account. After injecting for 20 years, Patrick reached his limit and finally stopped injecting:

"I stopped shooting up simply cause I could not get a 'hit' anymore. I have been shooting up for 20 years now. In the end I wasted three shots on one 'hit'; the solution coagulated or the needle clogged and I got sick of the mess, ... all the blood and the pain. I shot in my fingers, I tried all places. At last it hurt so much I got tears in my eyes. I added coke to the heroin, not for the kick but to relieve the pain."

Just as for Harrie, terminating injecting was not easy for Patrick:

"When I stopped shooting up and started chasing I had to use more to meet the gap in effect. In the beginning it was hard, I missed that certain feeling, you know."

What Patrick missed is made clear by Harrie, when he explained why he relapsed into injecting again:

"I can't control it, I just keep on going. (...) When I was chasing I was waiting for the flash to come, or something. I kept on smoking and thought: where is it, when does it strike me. I missed the flash. I've always been a heavy user. When I took drugs, I took a lot so I would really feel it. That's what I'm missing when chasing."

Conclusion

In general, the observed rituals are fairly stable --most users tend to stick to their ritual of preference. Other Dutch studies found similar results (1, 5). Although economic incentives (drug availability) play a major role, the choice for a ritual is also determined by several other social and personal factors, which are subject to change. Such choices are for example influenced by personal health and group norms. For long time injectors the condition of their veins becomes increasingly the main determinant of the choice whether to inject or not. At some moment they have literally used up their veins and injecting stops being an option. The decision to terminate injecting is postponed as long as possible, only making the problem worse. Prior to this moment the injecting frequency decreases and is supplemented by chasing. When moving from a network with a dominant smoking norm into an injection oriented network, injecting becomes a serious option. Not only because of social pressure, but also because it may yield certain economic benefits, e.g. when sharing drugs. Sharing drugs is a common activity both among smokers and IDUs (see chapter nine), but they engage in different sharing rituals (dividing powder v.s. solution). Conversely, when an injector associates with a group of smokers, for example when accepting a job in a dealing collective, injecting may be terminated to avoid social disapproval or simply because it is proscribed. Nonetheless, again these social pressures cannot be detached from the economics. Besides the drug sharing aspect, the increased access to drugs will assuage terminating injecting.

References

1. Korf DJ, Hoogenhout HPH: Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drugshulpverlening. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
2. Wagtendonk K: Grondslagen van de Islam. In: Waardenburg J (ed.): Islam. Norm, ideaal en werkelijkheid. Weesp: Het Wereldvenster, 1984: 97-122.
3. Gelder PJ van, Sijtsma JH: Horse, coke en kansen: Sociale risico's en kansen onder Surinaamse en Marokkaanse harddruggebruikers in Amsterdam. II Marokkaanse harddruggebruikers. Amsterdam: Instituut voor Sociale Geografie, UvA, 1988.
4. Gelder PJ van, Sijtsma JH: Horse, coke en kansen: Sociale risico's en kansen onder Surinaamse en Marokkaanse harddruggebruikers in Amsterdam. I Surinaamse harddruggebruikers. Amsterdam: Instituut voor Sociale Geografie, UvA, 1988.
5. Grapendaal M, Leuw E, Nelen JM: De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan. Arnhem: Gouda Quint, 1991.

RITUALS OF REGULATION: INSTRUMENTAL FUNCTIONS OF SOLITARY DRUG USE RITUAL

Contents

Introduction

Instrumental Functions of Drug Use Rituals

Rituals Communicate Cultural Norms

References

Introduction

Chapter four described the two ritual patterns of heroin use that are most prevalent in The Netherlands. The overwhelming majority in the study did not limit their drug use to heroin only, and also consumed cocaine and, to a lesser extent, other psychoactive substances. They are polydrug users. The nesting of cocaine in heroin rituals has had a profound influence on the total drug use pattern of the research subjects. Chapter five discussed the effects of this high prevalence of cocaine use on the use patterns and the consequences for the individual users and their social environment. Chapter six presented the findings on transitions between the two common administration rituals. In these chapters the discussion was largely limited to "the observable sequences of psychomotor acts" --the first of the two requirements of the definition of ritual utilized in this study. It was demonstrated that both the use patterns of IDUs and chasers, whether they use heroin only or in whatever combination with cocaine, fulfill the definitional requirement of a prescribed sequence. The extensive descriptions established that for both rituals a well defined set of paraphernalia is dictated --all with their specific function.

Whereas before the discussion was largely confined to the descriptive level, the coming chapters will take a more analytical approach and concentrate on the instrumental functions, and symbolic meaning of drug use rituals (the special meaning part of the definition). Chapter seven discusses the instrumental function, while chapter eight will focus on the symbolic meaning at an individual level. Chapter nine addresses the significance of these rituals for the relationships between drug using individuals in their social networks.

Instrumental Functions of Drug Use Rituals

Rituals fulfill various functions depending on the circumstances. Some of those functions are more and others less obvious. The fulfillment of practical needs related to the day-to-day management of drug use is an important aspect of both solitary and social rituals. In particular, in solitary drug use rituals this function is stressed. These rituals can be observed to function as regulatory device which aims at:

1. Maximizing the desired drug effect.
2. Controlling drug use levels and balancing the positive and negative effects of the used drugs.
3. Preventing secondary problems.

In practice, these functions are highly intertwined and for the superficial observer they may be hard to separate. For the purpose of analysis, however, they will be dealt with as separate as possible.

Maximizing the Desired Drug Effect.

Maximizing the desired drug effect can be seen in the preparation, the actual administration phase of the ritual and shortly after the drug has been administered.

The first two excerpts from fieldnotes are examples of such preparatory ritual actions:

He puts a couple of drops of lemon juice into the cup, enough to cover the heroin that is already in there. He then adds a few drops of water from the plastic bottle. "I first boil it with 'much' lemon and little water, it dissolves better this way". He puts his lighter under the scale ... and boils the content. He doesn't cook it through, but boils it shortly several times. Then he adds more water to it and boils it all. He shows what is happening inside the cup. "You see, it dissolves beautifully, almost no dirt stays behind".

With a knife Henry took out ± 1 stripe of cocaine and put it in a teaspoon. He then poured a little ammonia in the spoon and then he added a little salt (baking soda). "Adding a little salt to the ammonia gives the best results, I think."

In both cases the users try to maximize the output of consumable product by ritual procedure. In the first case boiling the base heroin with a strong acidic solution is an effective measure, but cooking it for a few short times instead of one longer but equivalent interval is not. What matters is the (low) pH value related to the total cooking time. Correspondingly, adding bicarbonate to the ammonia to improve the conversion from cocaine hydrochloride to cocaine base is not a valid procedure as the pH of the ammonia is considerably higher than that of the bicarbonate. Thus, in both cases the behavior does not fit a means to an end scheme --it is unnecessary by empirical standards (1). In the first example the behavior is mingled with an act that does have a causal relationship with the end result. In the following three examples the relationship between means and end is more ambiguous:

Fred took the lumps and started smoking the base in a glass 'water bong'. This bong is designed to smoke cannabis. It had a picture of a cannabis plant on it. Fred did not put any water in it. "We used to put water in it." Henry said, "But we found out that without water it goes much better."

Whether water is used in base pipes or not is dependent on factors such as group norms and personal preferences. It may, however, be of some influence as the contents of the chamber of the pipe can hold more smoke than when it is filled with water.

After smoking Fred sat back, closed his eyes and laid his head against the back of the sofa. He pressed his fingers to his ears and stayed that way for about two minutes. He concentrated on the rush. ...

Eric took his shot and is concentrated on the flash, sitting on his chair with his head bowed. Meanwhile Leo enters the attic. [and starts talking to Eric.] ... Eric asks Leo not to talk too loud because he just took a cocktail.

Both Fred's posture and the position Eric is sitting in, are supposed to have a facilitating effect on their rush. Many users have developed their own specific sequence surrounding the administration of the drug, intended to boost the rush.

Fred puts his fingers in his ears and Eric asks Leo to stop talking because they want to exclude outside stimuli which may distract their attention from their rush.

Chapter four presented some observations of booting (drawing blood back into the syringe and reinjecting one or more times). There exists some ambiguity in the scientific literature on the function of booting. According to Agar, IDUs boot for two reasons --to test the drug quality and to intensify the rush (2). Conversely, Zinberg argues that there is no causal relationship between booting and the rush (3). While assisting Doug with injecting, Jack, one of our key respondents, gave a more pragmatic explanation:

He takes the syringe, inserts the needle in the skin and hits a vein rather quickly. He pulls up some blood, presses the plunger, pulls up, presses, and pulls up again \pm 2 cc. of blood. Then he takes out the needle because he lost the vein. He hits again and presses the blood-drug mixture in Doug's vein. "It's a waste to throw it away. There is still some dope in it." Jack says.

Jack, as most Rotterdam users, used a two-piece 2 ml syringe. When the plunger of such an syringe is pushed down completely, there still is some (0.05 - 0.1ml) solution left in the hub (4). This may go up to (an estimated) 5% of the injected dose and therefore have some effect on the intensity of the rush. A similar effect may work when using an eye dropper with an attached needle, the most prevalent injecting device in the time of Agar's research in the U.S.A. (1960s). In the 1970s, when Zinberg did his research, the 1 ml insulin syringes were more commonly used and these are constructed in a way that there is hardly a residue left in the barrel when the plunger is pushed down completely. This may explain Zinberg's conclusion. Even when this explanation is valid, it does not account for booting five or more times, which was repeatedly observed.

These activities are directed at the perfection of the performance (5) with the goal of increasing the desired effect of the drug. Perfection is reached through repetition. The pleasure inducing or rewarding effects of drugs are a main incentive for their use as can be witnessed in the following quotes: "I want to enjoy the coke flash"; "It's pleasing me the most when I smoke them together"; "White really is a delicacy"; "Ah,

How nice it is!"; "I found the cocaine high delicious". Getting as much effect as possible from a given dose is the incentive for these actions.

Controlling Use Levels and Balancing Positive and Negative Effects of Drugs.

Most experienced users are well aware of the shadow sides complementing the desired effects of drug use --prolonged high intake of heroin leads to unmanageable dependence levels and frequent use of large amounts of cocaine results in negative side effects that outweigh the desired effects. An important function of drug taking rituals is to control use levels and manage or balance the negative and positive effects of the ingested substances. It is important to remark that control does not necessarily have to entail lower levels of intake. Within the study population, stability of use levels and successful prevention and management of, drug use (cocaine) related (psychological) problems may be more appropriate indicators of control. Control may best be perceived as a multidimensional process. Jack who is often employed as doorman at house addresses explained how he, in order to stay in control, organizes his use:

"I make 'kleine shotjes' (small fixes) with 1/4 to 1/2 'streep' (=0.025 to 0.050 gram) heroin in it, always. I will keep doing that. I mean, I can take more but than you get more sick too, and you can't effort it any more. Sometimes, when I do have more dope, I don't take bigger quantities in one shot, but I'll take more little fixes."

Jack has a rather stable use pattern. This is related to his rather continuous involvement in dealing, securing a steady availability of both cocaine and heroin. He further explained, that when working as a doorman his cocaine use goes up. Other users have more fluctuating use patterns --a period of heavy, uncontrolled use, followed by a period of regaining control in which they lower their intake or (temporarily) abstain from further use of, usually, cocaine:

Cor looks good. He wears a nice and clean shirt and a clean jeans. He tells he is working as a house painter again after a jobless period. At the moment he is with sick leave. He says he is doing alright now. However about two months ago he was not. He was in a period of intensive cocaine use. But he realized that he had to cut back his

cocaine use to an acceptable amount and although he says this has cost much energy, he stopped taking cocaine to recover again. He tells that he is using cocaine moderately now.

The use of ritual procedure to regulate the level of drug use and to balance the positive and negative drug effects is common practice among the research participants. This is most evident in their day-to-day patterns of heroin and cocaine use. The overwhelming majority (96%) used cocaine and knowledge of, and experience with the negative side effects of this drug was widespread. Some users say they only use cocaine when there is enough to satisfy their craving:

He tells he's only smoking cocaine when he has enough money to buy a gram or more: "Otherwise it's too less and I flip. When I've used a gram or more I've had enough and won't buy no more."

Others periodically decrease their intake of heroin or stop using the drug altogether. This may be out of neglect, for example when binging on cocaine (see chapter 5.4.3) or intention --to decrease opiate tolerance or in an effort to stop using drugs. In the latter case, cocaine is sometimes used to ameliorate or cover heroin withdrawal:

"A few months ago I kicked heroin with cocaine. In that time I smoked \pm 0.5 g cocaine per day and it didn't work me up at all. I felt high. When I smoke coke I want to be alone. When it's easy and quiet I don't get worked up from it."

However, cocaine used in administration rituals, doses and time schedules typical for this population (frequent smoking or injecting of relatively high doses) inevitably leads to a decrease of the desired effects and an increase of undesired ones. In order to control these undesired effects users frequently resort to the use of prescription drugs and heroin. According to many users, in particular heroin plays a crucial role in the process of leveling off the negative side effects of cocaine:

Some time later several inhabitants meet in the attic in Arie's room to drink tea. They talk about dope, making money, being stoned, pills, etc.

... [and] experiences are being exchanged about cocaine-use. Most of them tell they control cocaine through heroin.

Such statements are confirmed by many observations and informal interviews. Adding a knife tip of heroin (het kleurtje) to the colorless cocaine when smoked on aluminum foil is only partially done to make it easier to smoke or for hedonistic reasons. IDUs' cocktailing or injecting heroin shortly after a shot of cocaine is likewise not merely a matter of individual preference for a specific high. Countering undesired effects (dysphoria) is a prominent feature of these practices. Many users have an intense paradoxical relationship with cocaine, resulting in use patterns that spawn and boost the desired pleasurable effects while simultaneously self-medicating the negative side effects of the cocaine. They turn-take or combine cocaine and heroin, depending on personal preference, mood and drug availability. In the next excerpt Nadir explained his preference for turn-taking the two drugs:

Nadir isn't sure yet what he wants to buy. He says he only wants to buy some heroin "because cocaine makes me feel so para (paranoid)". But then suddenly he decides: "Well okay, I buy a little bit of cocaine too, just one streep", and he buys 1 stripe heroin and 1 stripe cocaine. ... I always first smoke the cocaine, pure without heroin. When I have finished the cocaine I start to smoke heroin. I must do it like that, otherwise the cocaine turns me crazy".

It becomes clear that such chemical mood control requires careful titration of the two substances. In the following, Jack explains the two main ways to manage the opposite effects of cocaine:

"Feeling the coke flash or not has to do with your spiritual attitude. When you don't want to feel it, you won't feel it. Users that don't feel relaxed won't get stoned nice." "When I take a shot of heroin after I took cocaine the speediness is taken away. You can talk relaxed again, you have the time to listen to other people. Then I feel myself becoming relaxed. In use there's a lot of suggestion." "A cocktail is a shot with 2 drugs, with different effects. I'll take a cocktail when I don't want to have

such a strong coke flash. I always save some heroin to take after the cocktail. The flash from a cocktail is not as intense as from coke only. But, everybody has different experiences."

Jack's explanation underlines the importance of the interaction of pharmacological, psychological and social variables in controlling the drug effects. Drug use rituals aim to regulate these variables by standardizing the procedures utilized in the drug taking experience.

Cocaine use has been nested in rituals developed for heroin use and has taken over its function of primary source of pleasure. This development has altered the function of heroin use to a great extent. When both drugs are used, heroin use has become almost completely intertwined with and subservient to cocaine use. It is mainly used to modulate the effects of cocaine, in particular to ameliorate cocaine's disturbing side effects. Thus, a functional relationship between heroin and cocaine has been established, which is displayed in the integration of both drugs in shared administration rituals, the aim of which is to maintain a delicate balance of desired and undesired drug effects.

Support for the hypothesis that heroin is used to control the side effects of cocaine is offered by the Rotterdam (methadone maintenance) treatment intake data, which is recorded in RODIS. Only 32% of the heroin users, applying for methadone did not use cocaine at intake, while 62% did and for an additional 6% use of cocaine had become problematic (N=1095). Their level of heroin use is presented in the following table.

Table 7.1.

Conform the ethnographic results, the level of heroin use of cocaine users (especially the problematic users) was significantly higher than that of non-users (6). A recently published study by Grapendaal et al. reported similar results. "The most common combination is heroin and cocaine. ... [There exists] a very strong correlation between heroin and cocaine use. When both substances are used there exists a preference for similar quantities". Their results confirm the changed functions of both heroin and cocaine. Just as in this study, their respondents explicitly refer to the paradoxical effects of cocaine and the self-medication aspects of heroin in regards to

the experienced cocaine related problems: "The coke is the nicest of all, but I don't want to become paranoia and therefore I always take some bruin with it" (7).

In chapter 5.5 it was suggested that prescription drugs have an additional value in controlling cocaine's side effects, in particular disturbed sleeping patterns and restlessness. Both the Grapendaal et al. study and RODIS corroborate the relevance of this suggestion. Cocaine and prescription drugs are combined in many polydrug use patterns (7). Users and problematic users of cocaine use significantly more substances than non users (6).

It can be argued that these ritual cocaine/heroin patterns are odd and rather inefficient regulatory devices. However, given the opportunities open to this group of regular users of cocaine and heroin, the prevention and management, or self-medication of cocaine related problems by use of heroin, does not seem an irrational option.

Additional Control Strategies

Many users do not have (permanent) access to financial resources required for maintaining the described cocaine/heroin pattern. They must resort to self regulation strategies that revolve around averting drug use situations and (periodical) abstinence. Then, regaining control is often the result of changes in the daily patterns and tightening up personal rituals and rules regarding drug use. About two months prior to the following fieldnote, Paco was in a period of heavy use. His landlord threw him out of his room, because he allowed many other users to get high at his place. The landlord had told him that they "did not live like normal people do." Being homeless, he spent the nights with friends he knew from the Central Station, who offered him a place to sleep --now here, then there. As he did not have his own place, he carried his works (injection paraphernalia) around and injected in public places, when drugs were available. When he told this, he was very stoned from heroin and prescription drugs. Two months later at the station he looked much better and talked about going to Morocco to withdraw and recover. He felt he had to as "I'm not living right this way, I've got to change." In fact, Paco had just made important changes that brought him back in control of his drug use:

Paco tells he has found a new room to rent last week. "I don't let other people use in my house anymore. They just make a lot of mess and

troubles for me with the house keeper. Now, when I want to use, I get some dope and go home. There I make and take my shot. I'm not gonna walk around with lemon, spoon, spike, etc. I don't like to do that."

Compared to two months earlier he made considerable changes. He found a new room, but did not let other users get high there, which must have limited his drug intake substantially as in such situations drugs are often shared. He no longer used just because the occasion occurred, but tried to plan his use. Moreover, he stopped carrying his works around, averting him from using at other places than at home. (This may, however, bring him in a position in which he feels forced to share needles when he does need to use outside the house, e.g. when being in withdrawal.) Thus, by making significant changes in his ritual and adopting stricter rules --only injecting at home; not allowing other people to use at his place; plan his use; not carrying works-- which had a stabilizing effect on his life structure, (8) Paco regained control. For other users, taking physical distance from the drugs (scene) seemed an important aspect of self regulation:

"We live in Zeeland. Originally we come from Rotterdam but we moved there because of the dope. It's very hard to get any there. But about once a week we make a trip to Rotterdam and buy some dope. We don't use every day. I get my methadone from the regional CAD. I can pick it up twice a week. They are rather flexible. I'm addicted for more than 15 years now, I tried to kick the habit many times and I've been clean for some periods. In one of these periods he came." He is pointing at the boy. It is a nice looking kid. He is well taken care off and looks good. He sits at his fathers feet hanging onto his legs. Softly he asks his parents when they will be leaving. "It is a good thing for us", his father says, "living in Zeeland. We don't use much, it's hard to get, that is good for us. I have a steady job there too." His wife tells she is using for 2.5 to 3 years now but she is not getting any methadone. "As he told we go about once a week to Rotterdam and that day we e.g. also go to the zoo, it's a day's outing that way."

By taking physical distance from the ritual place --the drug scene-- thus limiting the number of contacts that may lead to the start of the ritual sequence of drug ingestion, this couple regulates their access to the drugs. But they still like to use drugs and once a week they do. But by making this into a new ritual that combines drug use with other non-drug social activities, such as the visit to the zoo, they limit the time spent on using drugs, preventing an uncontrolled intake. From the fieldnote we can also see that the availability of methadone can be of help in keeping drug use under control. However, not all users fancy methadone. Especially Surinamese users often dislike this substitution drug. They emphasize its social control function, while it would furthermore lead to a double dependency. Sheep, a 35-40 years old Creole Surinamese man, who reported using heroin since 1972 explains his dislike of the substance:

"I use heroin and cocaine, I chase." Sheep feels that he is in reasonable control of his use. "Sometimes they (fellow users) ask me: You are never sick, how do you do that?" "Well, I am not in a methadone program. I don't want methadone, that is worse than heroin. You get much sicker from it."

Participating in a methadone program can also hamper plans of taking distance and regaining control:

"I was out of control, too much coke, you know. I first stopped the coke use. I was still in the methadone program. I had gone down with my dose. I took only three cc methadone per day, but I still had to come to the program every day. I didn't like that anymore. I was also reducing my heroin use, and coming to Rotterdam each day would make it only harder for me. Well, you know how it is, seeing everybody at the program each day. So, I'm not in a program anymore. I'm doing okay now, I'm back in control."

The daily methadone drinking routine can be considered a ritual --the sequence is highly determined and to the user it surely has special meaning (for one thing preventing withdrawal). The daily visit to the methadone program is often the moment

of meeting user- friends, usually followed by procuring and using drugs. In this way the methadone ritual smoothly shifts into the ritual that leads to drug use. The quote "Well, you know how it is, seeing everybody at the program each day." has a strong symbolic contents as it refers to drug user knowledge "which cannot be shared or transmitted in the course of ordinary social interaction" (9). It not only refers to going to the program, but also to the fact that the people coming to the program, are participants in the same rituals of taking methadone and drugs. Visiting the methadone program is the daily start of a number of ritual sequences --meeting user friends, talking about ritual subjects such as wit and bruin, making plans to raise money and going out together to do so, going to a dealing address to procure and use drugs and to socialize. In this respect, it can also be ascertained that rituals can disturb self regulation. While the daily visit to the methadone program offers some degree of life structure, (8) it remains a question if this is always a positive contribution, as this activity promotes contacts with other daily users. Just as the house address, the methadone program carries several characteristics of a ritual place.

Preventing secondary problems

Several distinguishable parts of the drug administration ritual are directed at preventing or limiting the impact of so called secondary problems. Chapter four already presented a few examples of such practices. Chasers often save their aluminum covered pipe for the following morning. When they then wake up and do not have money nor drugs smoking the residue in the pipe will take the first withdrawal symptoms away. Some IDUs use ascorbic powder for dissolving base heroin instead of lemon juice. It is believed to be safer than using lemon juice. The use of a filter when drawing the injectable solution into the syringe is meant to stop insoluble impurities and other particles from entering the body, preventing infections. The practice of heating the strip of aluminum foil before the drug is put on it and smoked is another clear example. It is meant to prevent the inhalation of a coating, which supposedly causes respiratory or other health problems. Chapter five described two practices of cocaine smokers that are also directed at preventing or limiting damage to the respiratory system -- rinsing the cocaine base lump with water after preparing it with ammonia and using sodium bicarbonate instead of ammonia. Besides the supposed preventative effect on the respiratory system, some users also

believe that this act averts "a terrible headache". What in fact is the effect of these precautions is not always clear. It has however become clear that many users practice spontaneous protective measures.

Rituals Communicate Cultural Norms

Many of the above described rituals have over the course of time developed into cultural norms --users may point at them and correct one another when they are not followed. For example, the practice of saving filters is generally disapproved of, as many users know, some by personal experience (in particular older users), that cooking up the filters and injecting this solution may cause a severe bodily reaction accompanied by sudden high fevers, chills, body shakes, etc., known as the shakes (in the Netherlands) or cotton fever (in the U.S.A.). One time a user was observed scolding a fellow user with cotton fever.

It was likewise observed that the knowledge of many of these practices is passed on to other users, normally in the course of the ritual performance itself. Rituals play an important role in educating novices about the rules of drug use (5). They serve to buttress, reinforce and symbolize these rules. Generally such information flow takes place at an unconscious level, as part of a peer group based social learning process (10). However, it is not uncommon to see more experienced users explicitly explain to novices why and how certain things ought to be done, as can be witnessed in the following two excerpts from fieldnotes:

The blonde (smoking) cocaine user is very interested in the shooting and watches it carefully. He asks some questions about how it is done and why. Doug answers his questions patiently ...

One of the [men] was explained a part of the cocaine chasing ritual. One of his friends put a lump of base on the foil and then with a lighter ... he melted the lump from above and let just a little smoke come from it. "This is what you do to take the ammonia rests out of it." "It's better for your lungs and you taste the difference." One of his other friends said.

Myths are an important ingredient of the observed rituals. For example, some users think that ascorbic powder is bad for the health, as it would "deposit on the heart valves". In particular cocaine seems surrounded by myth. Some users believe that cocaine melts at body temperature. Therefore holding a pack of cocaine in the hand or close to the body for some time is thought to affect the quality of the drug. But the melting point of cocaine is significantly higher than body temperature. For the same reason many IDUs, when preparing a cocktail, let the heroin solution cool down before adding the cocaine. Likewise, an injection of cocaine is never boiled. Cocaine may dissolve in water at room temperature, but heating the solution would probably prevent a lot of abscesses, associated with cocaine injecting, due to unsterile conditions. A probable explanation for these cocaine myths could be that cocaine is a relatively new drug in the Dutch heroin scene. Consequently, the knowledge about cocaine use may be still underdeveloped.

Many of the described rituals and rules are developed in the drug scene during a long process of casual information exchanges in informal networks --generally not based on objective information, but on personal experiences of users. Frequently the source of such information is not traceable and for many users its validity is hard to check (11). Therefore, many rules and ritual procedures contain rational and non-rational elements. In both cases they are supposed to have an impact on the outcome of the ritual. In actuality, they may or may not have such effects.

In his 1970s study on the determinants of controlled and uncontrolled drug use, Zinberg already argued that even "the most severe alcoholics and addicts ... do not use as much of the intoxicating substance as they could." He stated that "[s]ome aspects of control always operate" (12). The results of the present study reveal that, in fact, the observed activities surrounding the intake of drugs are, to a large extent, directed at safety and self regulation.

References

1. Nadel SF: Nupe religion. London: Routledge and Kegan Paul, 1954.
2. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 137-148.
3. Zinberg NE: Drug, set, and setting: The basis for controlled intoxicant use. New Haven: Yale University Press, 1984.

4. Grund JPC, Stern LS: Blood rests in Syringes; Not only the size matters, but also the type of syringe. *AIDS* 1991; 12(5): 1532-1533.
5. Nagendra SP: The concept of ritual in modern sociological theory. New Delhi: The academic journals of India, 1971.
6. Toet J: Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
7. Grapendaal M, Leuw E, Nelen JM: De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan. Arnhem: Gouda Quint, 1991.
8. Faupel CE: Drug availability, life structure and situational ethics of heroin addicts. *Urban Life* 1987; 15(3,4):395-419.
9. Cleckner PJ: Cognitive and ritual aspects of drug use among young black urban males. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 149-168.
10. Harding WM, Zinberg NE: The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 111-134.
11. Des Jarlais DC, Friedman SR, Sotheran JL, Stoneburger R: The sharing of drug injection equipment and the AIDS epidemic in New York City: The first decade. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988, pp 160-175.
12. Zinberg NE: The social setting as a control mechanism in intoxicant use. In: Lettieri DJ, Sayers M, Wallenstein Pearson H (eds.): *Theories on drug abuse: selected contemporary perspectives*, NIDA research monograph 30. Rockville Maryland: NIDA, 1980: 236- 244.

SYMBOLIC ELABORATION IN SOLITARY DRUG USE RITUAL

Contents

The Ritual Objects

The Ritual Sequence

Ritual Drug Combinations

The Power of Ritual

Conclusion

References

As explained in chapter four, observing (parts) of the drug ingestion sequence may elicit recognition and specific thoughts and feelings in a user, that are unknown to non users. Such references may be very strong and can induce drug craving, which, in turn, may lead to drug use. Even the sight of disposed drug paraphernalia, such as scraps of aluminum foil or an empty lemon juice bottle can have such effects. To users these objects have meaning beyond their appearance or actual function. They are symbols for a state of consciousness favored above that without drug use. Ex-users are often also very susceptible for such signs of drug use. This chapter investigates the special meaning of the drug use rituals at the level of the individual user.

The Ritual Objects

Most users (and also ex-users) of (illegal) drugs will normally speak positively about the actual effects of drug taking when such matters are discussed in a non-judgmental atmosphere (1). The frequent expression of these positive attitudes in the celebratory use of paraphernalia related to the administration sequence is a strong indicator of special meaning. Not only have certain paraphernalia developed into "shorthand emblems" (1) for specific drug user identities (the little coke spoon around the sniffers neck; a tattoo of a syringe, a T-shirt with cannabis leaves) but the actual use of these tools themselves --going through the ritual procedures and sequences-- may in fact add a large part to the effect. As Goldenweiser remarked, such actions generate "an overproduction of thought, emotion and activity. The elaboration of

these processes is accompanied by pleasurable emotion, it becomes an end in itself" (2). This may add to the explanation of the frequent practice of booting. Another good example is the construction of the pipe by chasers. Although the specifications of this essential tool are dictated by pragmatic considerations, many users put a lot of care and precision in making such a pipe; the process is subject to a great degree of stylization and a good end result often gives overt satisfaction. Users are usually not very eager to share their pipe as these are rather fragile and might get fucked up by uncaredful use.

Certain users' preoccupation with the preferred type of syringe can also be explained in ritual terms. The most commonly used syringe in Rotterdam is a 2 ml disposable with a detachable needle of 0.5 x 16 mm (5/8 x 25 "). Most IDUs prefer this 2 ml and for that reason it is dispensed by the municipal needle exchange schemes. A minority of IDUs favor the slimmer 1 ml insulin syringe with a thinner (0.36-0.40 mm.) fixed needle. Such preferences can be very strong as the following fieldnote depicts:

A male IDU of \pm 35 years enters the Needle Exchange and asks for a syringe. He is handed a 2 ml two-piece pack. He asks if there are 1 ml insulin syringes available, as he does not use the 2 ml type. When he is told that only the 2 ml type is dispensed, he returns the 2 ml syringe and leaves.

This excerpt indicates that, from a harm reduction perspective, availability of several types of syringes at needle exchanges is important. In the next excerpt two IDUs explain their syringe preference:

Sjef tells he prefers the 1 ml type: "I prefer them because I've always used them. I feel more secure handling it, I'm experienced in using it."

Jack: "I prefer the 2 ml spikes. I can't handle the other ones, they're so fragile. I find it harder to pull back the plunger and so."

Jack's explanation is in terms of the physical properties of the instrument. However, a careful look at Sjef's explanation shows that his reasons also focus on the symbolic meaning. Explanations such as "I've always used them" are much alike those often used by devotees to explain religion and other customary behavior --That is just the

way things are; It is the custom; We follow the liturgy of the church. "Ritual is commonly validated by its supposed antiquity" (3). The phrase "I feel more secure handling it, I'm experienced in using it" not only refers to a standardized pattern of syringe use, but also illustrates the anxiety reduction properties of the familiar syringe (4). Thus, for Sjeff the preferred type of syringe has ritual value, as it enhances and thus symbolizes a positive outcome of the ritual sequence. Again, a blend of instrumental and symbolic motivations is found.

The Ritual Sequence

Another indicator of special meaning is that parts of the ritual sequence for many users seem just as important as the complete process. Durkheim already observed this phenomenon in his early studies of religion. He wrote "When a sacred thing is subdivided, each of its parts remains equal to the thing itself. ... [I]t has the same powers, the same efficacy" (5). In the highly secular drug subculture under study here, it was not expected to find examples that fit this description completely. However, a rich gamut of examples that illustrate the point was found. For some users the quality of certain parts of the drug taking sequence is indicative for the results of the whole procedure. For example in the following example the quality of heroin is judged on how it runs along the aluminum foil while heated:

In the mean time Achmed shows him how good the dope runs on the tin-foil "You see, I told you, it's always good with him (the dealer)".

There may be a relationship between the purity of the heroin and its behavior on the aluminum foil, but again this lore is not based on objective information, although it is a widely spread belief among chasers. That there is a real relationship between means (running on foil) and ends (good quality heroin) is questionable as during the fieldwork the community fieldworker came across an adulterant with exactly this valued specification. After winning the confidence of a middle level dealer, he was shown a powder, having the specifications of ideal heroin. It exhibited the consistency and light brown color, associated with so called *Stuif Paak*, a Pakistani heroin and it melted and ran along the foil as only heroin of exceptional quality is rumored to do, without leaving a trace. But it had no psychoactive effect whatsoever. The dealer was aware of the beliefs and practices of chasers and told the fieldworker

that this powder is used for adulteration in order to take advantage of the demand for good running heroin. Likewise, some smokers relate cocaine's effect to the taste and numb feeling that it produces:

"When I smoke and I don't get that certain taste in my mouth I won't get high from that coke it's hard to describe, I have to feel it in my lips and in my throat, and if I don't feel it, I won't get stoned from it".

Cocaine may, however, be cut with related substances (e.g. procaine) that do cause a numbing effect but do not have the same psychoactive effects. Again, the behavior does not fit a means- end schedule.

In the next example John visited a friend one night. He brought along a little heroin:

John showed a little heroin and proposed to smoke it. First his friend agreed, but a few minutes later he said "Maybe better not, I have to work tomorrow morning." John, who already had started to prepare for smoking got a little out of balance and, looking disturbed, he said "What are you doing now? You can't do that. Don't break the ritual."

This Garfinkelian breach of the ritual (6) revealed that, for John, the start of the drug use sequence resulted in an increased craving for the drug. Often short before the administration of drugs, users get highly aroused (7). When involved in conversation, some users cease talking and may even get annoyed when others continue. They want to concentrate on the task at hand and the anticipated state of consciousness -- a major function of ritual (4). As one IDU explained:

"As soon as I put it on the spoon my stomach turns around and I know it's gonna happen, I'm gonna feel that intense rush."

Such strong reactions are not unusual. An ex-user explained how, in the time shortly after her detox, she would start to crave when she received her salary. She did not dare to go on the streets with money in her pocket --for her money equaled dope. Similar accounts have been described before (8). She also reported that one time, three years after her detox, when she was walking on the street in a neighborhood

with high drug activity, she had to throw up after smelling a wasted shot. During the fieldwork such physical reactions were also observed:

When Achmed took his first 'zucht' (sigh=smoke), Nadir was shivering. Nadir touched Achmed saying: "did you see that, just from the smell I get cold shivers and chicken- skin", and he shows it to him, "I have that especially when I'm sick, what a reaction isn't it". Achmed says he is familiar with it too.

Ritual Drug Combinations

Many drugs are often combined in shared administration rituals. The combination of heroin and cocaine is most evident in the study sample, but other drugs are combined also. The use of methadone, prescription drugs and alcohol in various combinations is a notorious example, especially favored by impoverished users, who cannot afford heroin and cocaine. Chasers frequently combine their heroin and/or cocaine use with intensive tobacco smoking. Monroe, for example, always lit a filter cigarette before she started chasing. While chasing, she took some puffs, but often the cigarette just burned up in the ashtray. For numerous users, smoking cigarettes is strongly associated with heroin or cocaine use and after quitting these drugs, they frequently noticed drug craving when smoking tobacco. One former heavy cocaine user, who smoked the drug in Marlboro cigarettes, reported that months after he stopped smoking cocaine, he would often still taste cocaine when smoking a Marlboro. Likewise, two smokers of tobacco and cannabis (not involved in this research) classified themselves as nicotine addicts, but said they smoked cannabis only recreationally. Because of the harm associated with regular tobacco smoking and their awareness of these effects on their body and performance, they (independently) decided to stop smoking tobacco, but continued the use of cannabis. However, in the Netherlands cannabis is generally smoked in hand-rolled joints with tobacco. They tried smoking pure cannabis from a pipe, but did not like this as they often had to cough, because of inexperience with the distinct smoking ritual and they missed the feeling of the joint (and of course also the cigarette) between their fingers which they associated with sociability. Therefore, their continued recreational cannabis use hampered their efforts to stop smoking.

The Power of Ritual

Many users are well aware of the symbolic power imposed on parts of the ritual sequence or objects essential for the performance of the sequence. The following IDU started working as doorman at a house address where only smoking was allowed. He tells:

"I stopped shooting up two days ago", he tells, "... I quit kinda radically; I brought back the container and the box of syringes to the exchange program."

By removing the essential paraphernalia he prevents the onset of the ritual sequence. It would probably have been a greater effort and cost much more stress to abstain from injecting, if a syringe would have been available. A similar process seemed to be at work in the case of Monroe. Monroe had relapsed into heroin use after she detoxed and was clean for some months. Just as before quitting, she chased her heroin. Prior to her detox Monroe was very uncompromising about her aluminum covered pipe and smoking foil. These tools had to satisfy her strict specifications. After her relapse she however only used a rolled up piece of thick paper, something she would not have done before detoxing. When she was asked about this discrepancy she explained:

"Then it becomes such a ritual again and I do not want that to happen. For me that would be a sign of being completely into it again. You know, saving the interest for the next morning, etc."

For Monroe the aluminum covered pipe acted as a strong symbol for the demanding lifestyle she was trying to give up.

In chapter four it was shown that drug craving can have an effect on the performance of parts of the ritual. The preceding examples demonstrated that ritual and its distinguished parts, drug paraphernalia, ritual places and situations in which drugs were used and other related cues can also influence craving. Many, for the superficial observer, insignificant cues can elicit drug craving and subsequent use. For that reason, users who try to regain control over their drug intake limit their exposure to

certain stimuli associated with their drug use rituals. They may avoid certain places or even move to another town. Often people try to avoid meeting their (former) using buddies:

"I really tried to stay out of his way, but every time I met Hank I felt the urge coming up. I knew we were gonna do cocktails and that's what happened, each time we ran into each other".

All these phenomena are related to the specific mindset produced by the performance of the ritual sequence. The ritual and its parts focus attention by suppressing or excluding distractive thoughts and stimuli. Thereby it appeases motivational conflict, curtails anxiety and fear and increases confidence in a good result of the task at hand (4, 9) --the high longed for. This phenomenon is again not limited to illegal drug use. For example, many users of tobacco who try to stop smoking find this especially difficult in certain situations (e.g. at parties or when offered a cigarette by an ignorant), at moments that are normally associated with smoking (getting up in the morning, after completing a certain task, or after dinner), or when using drugs that are often combined with tobacco (e.g. coffee or alcohol). The drugs may be different, the ritualized complex of physiological, psychological and social processes resulting in craving, drug seeking behavior and drug use, is alike. "Special meaning is [also] indicated by either obsessive performance of the ritual, or continued performance ... after the rationale is no longer present" (1). Such examples of what may be called hyper ritualization were also observed during the fieldwork. Chasers can sometimes get really upset when the heroin does not run well on the foil or chars quicker than expected, which is taken as an indicator of poor smoking quality. But most examples concerned IDUs. In particular older ones, who have few accessible veins left. In chapter six it was presented that they continue injecting until all veins are used up. With injecting careers sometimes exceeding twenty years, for some the needle has become an integral part of their life and the most dependable source of comfort and security. They will carry on injecting just for the feeling of the needle:

Bennie was trying to shoot up but it wasn't working out very well. His right arm was tied off with a belt. There were three large injection sites

on the outside of his underarm. In one he was searching for a vein. The syringe contained a mixture of a heroin solution and a little blood. He continued searching for at least 20 min. In the meantime he was participating in the conversation. Then he examined his other arm for a willing vein. He looked concentrated at his left hand, turning it in the light. He tried a spot on the back of the hand, but after a while he gave up, took a piece of tin foil from the table, put some brown powder (heroin) on it and started chasing through a crummy tinfoil pipe. When prompted, he explained "It is not working out, because I am not all that concentrated, when I go to the bathroom I'll fix up in no time." His inability to shoot up didn't seem to arouse him at all. On the contrary, he stayed calm and relaxed. He may well have enjoyed just playing with the needle.

Bennie seemed in the middle of giving up injecting. Judging the discrepancy with his obvious inability to hit a vein, his explanation seems merely self-deception, which may well be part of the process. The crummy pipe indicates that chasing is still only viewed a necessity, while pleasure remains pursued by injecting. Bennie did not seem to suffer pain or anxiety --he did not display visible signs of pain or disturbance. For that matter, he (or this event) may be an exception:

On his arm Gus had some smaller and larger abscesses and trying to take a fix he needed to be alone without talking around. When it wasn't working out he got very aroused and angry. His partner, Ria Vis with whom I sat in the living room (Gus was in the bedroom) said that this happens all the time. "He's stubborn, if he just asked me I'll help him and then its done". "It looks like you enjoy it", she shouted to the bedroom. "In the end he asks me anyway, wait and see." ... And so it happened.

Some users were observed to inject solutions that contained quantities of the drug, too minuscule to sort an effect:

He cuts the plastic bag open to get the remaining coke out. There is only a little left on the plastic. With a knife he carefully scrapes the coke from the plastic. It is almost nothing. He takes the filter from the spoon and wipes off the plastic and the knife. Then he puts the filter back in the spoon. There is even a little flint of plastic in the spoon. "There's coke on it, it will come off in the water." Now he checks the table for coke crumbs. He finds two, picks them up and adds them to liquid in the spoon. "I wonder if I will feel a thing from this." ... He tries four spots before he hits a vein. Then, while booting loses the vein several times. Finally he stops and takes the needle out of his arm. ... "It's too less, I don't feel a thing. Tomorrow I've got money again. Then I can buy heroin and cocaine again. When I shoot cocktails I shoot less."

Not only does this user shoot a quantity of which he must know that it will not sort an effect, he is also booting, although, due to the condition of his veins, this is very difficult and he runs the risk of wasting the whole shot. Moreover, he is checking the table for cocaine crumbs he might have missed. Some users can get really obsessed with this activity. During the fieldwork at the house addresses only one other example of such frantic and obsessional behavior was observed. At the Central Station, where the more marginalized and often homeless drug users hang out, this "digging for diamonds" (10) is more common. There it has even drawn the attention of the surveying police officers, who have named people acting like this chicken (11). Such behavior is traditionally associated with intensive use of stimulants (12). In the current study mainly with heavy use of cocaine. Most users are aware of the obsessional quality of cocaine. In particular when bingeing on the drug obsessive thinking may interfere with the desired high, as this user explained:

"There I go again with that coke, I just took a shot. Often the needle is still in my arm and I'm in the flash. But already I'm thinking about the next shot. You're so busy with the next one that you ruin the flash you're in."

In the Rotterdam scene this is referred to as the famous last shot. The cocaine rush is ruined by anxious and distractive thoughts about where and how to get more.

Conclusion

This chapter presented evidence of symbolic elaboration in solitary drug use ritual. It should, however, be understood that not all research participants experience these phenomena in the same degree. For example, to some users the order of the administration sequence is of main importance, whereas others just want to get the drug into their body. Therefore, as with any form of ritual behavior "Intragroup variation in the extent to which the event is perceived as a ritual" can also be expected in drug use rituals (1).

Learning processes play an important role in ritual. For the last forty odd years, behavioral scientists have emphasized conditioning factors in drug use and especially in relation to relapse after detoxification (8, 13, 14, 15). Based on these studies several extinction procedures have been designed and evaluated with varying results (16, 17, 18). However, such approaches have often omitted the social dimensions of the rituals of drug users. The functions rituals fulfill in the given social space and their effects on the collective consciousness of the community of users are frequently not considered. In the next chapter the analysis will focus on the social functions and meanings of drug taking rituals.

References

1. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 137-148.
2. Goldenweiser AA: Review les formes élémentaires de la vie religieuse. *American Anthropologist* 1915; 17:719-735.
3. Wilson M: The wedding cakes: a study of ritual change. In: La Fontaine JS (Ed.): *The interpretation of ritual*. London: Tavistock, 1972.
4. Wallace AFC: *Religion: An anthropological view*. New York: Random House, 1966.
5. Durkheim E: *The elementary forms of the religious life*. London: George Allen & Unwin LTD, 1971.
6. Garfinkel H: *Studies in Ethnomethodology*. Englewood Cliffs N.J.: Prentice Hall, 1967.
7. Wikler A: A theory of opioid dependence. In: Lettieri DJ, Sayers M, Pearson HW (eds.): *Theories on drug abuse*. Rockville, Md: National Institute on Drug Abuse, 1980.
8. O'Brien CP, Childress AR, McLellan AT, Ehrman R, Ternes JW: Types of conditioning found in drug-dependent humans. In: Ray BA (ed.): *Learning factors in Substance Abuse*. NIDA Research monograph 84. Rockville MD: National Institute on Drug Abuse, 1988: 44-61.

9. Nagendra SP: The concept of ritual in modern sociological theory. New Delhi: The academic journals of India, 1971.
10. Froner G: Digging for diamonds, a lexicon of street slang for drugs and sex. San Francisco: Health Outreach Productions, 1989.
11. Barendregt C, personal communication 1991.
12. Carey JT, Mandel J: A San Francisco Bay area "Speed" Scene. *Journal of Health and Social Behavior* 1968; 9: 164-174.
13. Wikler A: Recent progress in research on the neurophysiological basis of morphine addiction. *Am J Psychiatry* 1948; 105:328-338.
14. Wikler A, Pescor FT: Classical conditioning of a morphine abstinence phenomenon, reinforcement of opioid drinking behavior and "relapse" in morphine addicted rats. *Psychopharmacologia* 1967; 10: 255-284.
15. O'Brien CP: Experimental analysis of conditioning factors in human narcotic addiction. *Pharmacological Review* 1975; 27: 535-543.
16. Götestam KG, Melin L: Covert extinction of amphetamine addiction. *Behavior Therapy* 1974; 5: 90-92.
17. O'Brien CP, Greenstein R, Ternes J, McLellan AT, Grabowski J: Unreinforced self-injections: Effects on rituals and outcome in heroin addicts. In: Harris L (ed.): *Problems of drug dependence, 1979: Proceedings of the 41st Annual Scientific Meeting, The Committee on Problems of Drug Dependence, Inc. NIDA Research Monograph 27. DHEW Pub. No. (ADM) 80-901. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1980: 275-281.*
18. Childress AR, McLellan AT, Ehrman R, O'Brien CP: Classically conditioned responses in opioid and cocaine dependence: A role in relapse? In: Ray BA (ed.): *Learning factors in Substance Abuse. NIDA Research monograph 84. Rockville MD: National Institute on Drug Abuse, 1988: 25-43.*

DRUG USE AS A SOCIAL RITUAL

Contents

Social Drug Use and Social Structure

The Social Structure of Illegal Drug Use

Social Rituals and Rules Surrounding Group Drug Use

The Ritual Sharing of Drugs

Instrumental Functions of Drug Sharing

Rules of Sharing

Symbolic Functions of Drug Sharing: Effects on the Social Consciousness

References

Social Drug Use and Social Structure

With other humans, users of heroin and cocaine share an overriding need for warmth, contact, interaction, (group) identity and social solidarity (1, 2). In that respect they do not differ much from users of other drugs, such as tobacco, alcoholic beverages and cannabis products. Group use of drugs (legal or not) is a universal practice (3) to initiate and potentiate situations that satisfy the above needs by engendering feelings of togetherness, identity and solidarity. Social drug use serves as a social lubricant and thus as a ritual binding mechanism (4, 5). An important difference can be found in the status of the drugs and the legally sanctioned opportunities offered for their use. Some drug use is integrated in culturally defined and legally sanctioned social structures, built on a history of experience with use and misuse. Tobacco can be used in almost every social group or gathering (although there is a recent trend to limit smoking in public places, e.g. by forbidding smoking in administrative office buildings and creating smoke free zones in restaurants and trains). Group use of alcohol is an important feature of many human interaction, in particular at festivities, receptions, and in leisure time. Moreover, there are many designated places for alcohol use, e.g. cafes, bars and dancings. A well defined set of social controls has been developed surrounding the use of these two substances (6). In The Netherlands such provisions are even created for the use of the relatively new drug cannabis in the form of so called coffee shops that offer the opportunity to

buy and use this drug. In an increasing number of cafes and dance clubs the use of cannabis is nowadays normalized.

For the use of illegal drugs, such as cocaine and heroin such venues do not exist. Society at large does not know how to deal with the use of these drugs and, as a consequence, does not provide its users with guidelines and models for socially accepted and controlled use of these drugs (7). Likewise, legally sanctioned or tolerated social structures for the use of these drugs are absent. This does, however, not mean that such controls do not exist. Nor does it mean that a social structure for the use of heroin and cocaine is absent.

The Social Structure of Illegal Drug Use

In addition to the processes described in chapter two (2.3.3, 2.3.4) the notion of social structure is also of importance for this study. A social structure can be defined as an ordered series of social relationships (being defined as existing between two or more individuals if there is some harmony in their individual interests) or a system of values (8). Undoubtedly, there is some harmony in the individual interests of users of illegal drugs and therefore each individual drug user has a value for the others. This will result in a community with similar interests or "an agreement upon certain recognized values" (8). In the drug using community these values include a positive attitude towards drugs and the associated patterns of use. But because of the illegal status, survival and secrecy will be equally important and these can sometimes conflict with the former two. The drug subculture can further be described as an adaptive mechanism which enables drug users to live an ordered social life in the environment given by the conditions of drug prohibition (9). Malinowski described this adaptive mechanism as two-fold:

"Firstly, there is the primary or external adaptation which consists in man's adjustment to his geographical environment and is motivated by his basic biological and physiological needs --the instrumental imperative. Secondly, there is the secondary or internal adaptation which is motivated by the integrative imperatives --that is, the necessity

for harmonizing the conflicting needs and aspirations of man." "The former type of adaptation is evidenced in all the various economic, political, educational and legal activities of human beings. The latter type of adaptation is in fact the integration into normatively regulated social behavior of all such activities of man which his instrumental imperatives urge him to perform." "It must be emphasized that this adaptive mechanism (culture) is always end-oriented, the end being the satisfaction of man's primary and secondary needs; and furthermore, that each and every constituent of it has a definite form and function as determined and defined by the cultural context which in its turn is to be understood with reference to the social configuration to which it (the culture) belongs."

When this functionalistic perspective is applied to illegal drug use the instrumental imperative becomes clear --drugs. This basic need of drug users is thus the driving force of the subculture. As an adaptive response to a hostile environment -- represented by mainstream society's drug laws and their enforcement-- drug users have developed their own specific channels to secure the relatively undisturbed use and acquisition of drugs. Moreover, the stigma (10) or deviant label (11) attached to the use of these drugs, thwarts participation of its users in conventional social structures, leading to increasing active involvement in the social structure formed around this stigmatized and deviant activity --the subculture. The universal need for interaction, solidarity and harmony --the integrative imperatives-- will then lead to the integration of drug use in a subcultural set of rules and rituals ultimately aimed at the maintenance of this social structure that is essential for the satisfaction of drug users' needs.

Social Rituals and Rules Surrounding Group Drug Use

And in fact, the preceding theoretical deduction is supported by the data as explicit rituals and rules have evolved around the most apparent need of drug users, in particular around use and acquisition of the preferred substances. Most of these rituals and rules are normally not explicitly defined. Seldom are they discussed by the research participants. When discussed, it is mostly when they are broken, in initiations, or in other special situations. They are part of the stock of knowledge that

the experienced user utilizes in his everyday dealing with the social space he is living in. "The values [or rules] that prompt or sanction the performance of ritual are also ... the same values that motivate people in their everyday life" (12). Rituals and rules are often closely intertwined (13) expressing the same cultural elements, each one amplifying the other (14). For these reasons radical separations between the two can, in most cases, not be made (13).

Ritual Places --The House Address

Social drug use rituals are performed at places where drugs are sold, where people hang out, use drugs and socialize. Such places are important locales of the subculture. In Rotterdam most drug sales occur at house addresses, and at these addresses it is generally allowed to use the purchased drugs. Besides at house addresses people use at home, their friends homes, abandoned buildings and other public places. These places are also frequented to meet friends and socialize. Figure 9.1 shows where the observed drug administrations were recorded.

Figure 9.1

Although IDUs use their drugs much less frequent at house addresses (frequently they are not allowed) than smokers and more at home, a friends home, or in public places, it can be ascertained that house addresses in particular serve an important function in the social structure, as they combine two important elements --purchasing drugs and socializing with other drug users. The average house address is located in a rented house, or a squat waiting for renovation. The resident allows a dealer to sell at his place and in exchange he gets free drugs and sometimes some money. House addresses often move around. One user, who was involved in dealing, alternately as the dealer and as the one providing the place, called this a spreading of the risk to prevent police detections and busts.

The Rotterdam Police Policy Towards House Addresses

In Rotterdam many of the house addresses are actually known by the police. The places are sometimes visited by police officers, who come to look for a certain person, or to see what is going on:

Doug and Harrie report about a visit yesterday of two police detectives from the narcotic squad. Doug tells "They didn't do nothing, they made a nice chat. They saw Harrie busy with making a package for a

customer. He was taking out cocaine from the bag with a knife and put it on a paper. They saw it and didn't do anything. They told Harrie to keep things quiet around here. And they were happy for me that I could make my dope by doing this. They said they had noticed, they hadn't seen me on the streets for some time, making my money. "It's better you stay here"; they told me". He continues: "What do you think what a difference it makes to me, socially and financially. I'm staying out of the hands of the police. Keep more money in my pocket, don't have to hustle all day, be out on the street constantly, etc". Harrie confirms that he feels the same way. He hasn't been dealing always, just a couple of months now. He says: "Now I can stay out of the criminal circuit through this dealing".

Apparently not only drug users make a distinction between consumption level dealing and the criminal circuit. It is evident that the house addresses can only exist by the grace of this pragmatic policy of the Rotterdam Police. This policy is based upon the Dutch national drug policy, that is not aimed at eradication of the drug problem, but at its containment and management of drug-related problems (15, 16). At the local level this resulted in a policy that tolerates the use and sales of heroin and cocaine within certain, rather vague, limits. House addresses where these drugs are sold and used are often condoned as long as there is no trafficking in stolen goods, no sales of large quantities or too many customers and, related to that, above all, no unacceptable nuisance for the surrounding residents. This policy is also communicated to the users. In the following fieldnote the researcher witnessed a visit of a uniformed police officer to a house address, that was busted for dealing the week before. That morning, the residents of the place were released out of custody. While one of the residents prepares an injection of heroin, the policeman explains why the place was busted:

"It was because the neighbors had complained and it is the police policy to shut down dealing places when they cause too much nuisance." He warns Karel not to let another dealer start dealing again. "It is a question of our credibility to the neighborhood", he says. "Send addicts who want to buy drugs to Curly's place (which is a few blocks across

the street). Let their neighbors have the trouble for a while. If it starts here again, we will crack it down immediately."

The explanation of this police officer reveals a core of the Rotterdam drug policy -- reduction of drug related nuisance. It furthermore shows the awareness of the police of other dealing places --in this case at Curly's house.

The Organization of the House Address

A house address is normally ran by a dealer and his staff. The staff exists at least of a doorman and a guard to prevent robberies. Sometimes there are two guards, another person behind the weigher or a go for --someone who does shopping and delivers messages. In general, they are paid in drugs. Often the resident fills one of the positions. There are a few different types of house addresses. At the most common type drugs are sold and smoking the purchased drugs is allowed. At these places, smoking paraphernalia, such as aluminum foil, ammonia or baking soda and spoons (to prepare cocaine for smoking), toilet paper or tissues and water are supplied as a service to the customers. At a minority of house addresses injecting is allowed, generally, when either the dealer and/or the resident are IDUs. Often a separate room is designated for that purpose. At some places where injecting is permitted, injection paraphernalia and chemicals were available for common use, such as spoons, water, acid (lemon juice or ascorbic powder) and sometimes clean syringes and needles, which were supplied by a nearby outreach and needle exchange program (see chapter fourteen). Sometimes one can only use drugs bought elsewhere, because drugs are not sold at the place. There are no clear cut borders between these types and the situation can change from the one into the other, often depending on the people who run the place. There are no explicit charges, such as entrance fees or for the use of paraphernalia, which are normal in comparable American shooting galleries (17, 18, 19).

Most house addresses have a clear layout with the intended purpose to separate the dealing from the using so that the dealer can easily survey the situation (Figure 9.2).

Figure 9.2

When the dealing and using happens in the same room, the table of the dealer typically stands in a corner, separated from the table or couch designated for using:

The dealing is taking place in the back room. At this moment Lottie, a Surinamese woman is selling. She sits on a couch that's standing against the window side. In front of her a low, square, white table. On the other side of the room stands another couch, in front of it a little wooden table with two more chairs around it. This 'corner' is used by the customers to smoke their dope.

Sometimes different rooms or even different floors are used.

Rules and Ritual Interaction at House Addresses

As a rule, only one or two customers are allowed to enter the dealing room or take place at the dealer's table at the time. When the transaction is completed the customer must leave this room or table. He can then either leave (IDUs often do) or take a seat at the for smoking designated area:

Someone is coming up the stairs. The guard asks the boy on the couch to leave. " 4 people up here is too much, we allow 2 customers at the same time in the attic room. The others have to wait downstairs. Normally you also can't use here, you have to do that downstairs."

From the guard's explanation not only the rule becomes clear, but also that it is not always equally applied. Friends, (very) steady customers and other high status users are often invited for a chat and a smoke at the dealers table:

Jack has just brought in a new client, who orders a quarter gram heroin. ... Lottie empties the scale by putting the heroin into a paper. ... She tells the new client that if he wants to smoke he has to go to the use corner on the other end of the room. ... In contrast, Jack is allowed to smoke at her table.

A further rule allows only for a certain number of people using their drugs at the place. This limit can vary by place and time. Most dealers are stern innkeepers. Unless he has a distinctive relationship with the dealer or the resident, the person that came in first is summoned to leave by the doorman or dealer (after a reasonable period of time) when the maximum number of people is reached. During the

observations it was not observed that people disputed the basic premise of these two rules:

After a while Boris asks a customer to leave. The man says that he will after his chineesje is finished and so he does.

By limiting the number of people present, the dealer and his staff can not only survey and control the place to a greater extend, it also preserves a good atmosphere by preventing tension originating from hectic bustle. This is especially important when large amounts of cocaine are consumed. While drug use at house addresses is frequently characterized by a sociable pub-like atmosphere, when heavy cocaine use dominates the place communication often ceases and there is an imposed silence, as a consequence of the in chapter five described increased sensitivity for sound. Sometimes even the light is dimmed. As one experienced user explained a novice: "When shooting up cocaine, there has to be some rest and quietness for some time." Whether the drug is shot or smoked does not seem to make much difference. The next fieldnote was recorded at a dealing place where cocaine was smoked:

It's extremely quiet in the room. The doorman is the only one standing and walking around. The two windows at the street side have lace curtains. The low table stands on the left side of the room. Around it 10 users are sitting, one of them is the dealer who sits in the middle of the long end with his back against the wall. Everybody seems to be turned into themselves. No one talks with one another. All are smoking or have been smoking cocaine. They are all looking straight ahead into nowhere.

It is not unusual for the doorkeeper to point entering customers at a cocaine dominated atmosphere and ask for silence:

The door is opened by a girl, she's the porter and helps cleaning the place. She lets Nadir in, asking him to be relaxed because the people inside are smoking cocaine. In the room there is hardly a word spoken, everybody stays very calm and speaks with a low voice. If there is any conversation it's about the works on the table: "Can you give me the

knife, can I have your lighter for a moment, is there some clean water", etc.

Such warnings are certainly not pointless. When disturbed in their rush cocaine users can get irritated:

Doug sits relaxed in an armchair and enjoys the cocaine rush. A few moments later two other users enter the room. They are noisy and uptight because the dealer has already closed business and left. The expression on Doug's face (who is still in his rush) hardens: "They're screwing up my 'flash'," he says, "Why must they be so noisy?"

Such a situation can be compared with rambunctiously entering a football canteen crammed with supporters who are all highly concentrated watching a cup finale on television. Then suddenly turning off the tv, while the star player of their national team is taking the decisive penalty. Such a loaded atmosphere can escalate into a sudden outburst of violence:

There is suddenly rumor coming out of the living room. For some time two Dutch users and a Moroccan are using there. One of the people that are waiting knows that they have been smoking cocaine the whole afternoon. That's why they're in that room, it's too crowded in here. Suddenly the sound of breaking glass. The waiting room floats empty, most of them go on to the street. The Moroccan boy jumped through the window. He was chased by one of the Dutch guys armed with a stick. The other Dutch tells: "He is 'para' from the cocaine, he wanted him (the Moroccan) to be quiet but he kept on waffling."

House rules are thus primarily directed at the smooth functioning of the house address --both internally and as part of the non-using community. The main objective is to secure the safe and undisturbed intake and purchase/selling of drugs. It can be determined that safety in this context has a double meaning --safe use, directly related to the intake of drugs and safety in relation to the outside. Examples of the former, such as smoking only (smoking is a safer mode with a very low chance of overdose), limited number of people present and silence when cocaine is smoked

can equally be applied to the latter. For example, limiting the number of people present not only has a positive influence on the mutual interactions, it also makes the situation more controllable for the dealer and it limits the nuisance in the neighborhood, which limits the chance of detection and busts.

Ritual interaction around the actual purchase of drugs at house addresses is limited. There may be some ritual deliberations over the volume of drugs one receives for the money paid, the position of the balance on the scale or the respect one has to pay the dealer. In contrast, American research indicated elaborate ritual interaction in drug sales, aimed at the detection of undercover narcotics officers --often a customer has to shoot up in the dealer's presence to assuage (necessary) suspicion (20).

The Ritual Sharing of Drugs

The most explicit social ritual revolves around the sharing of drugs. Both smoking and injecting are commonly done with other people present. The mean number of people present at the observed smoking rituals was 5.4, for injecting this was 3.3. In 50% of the observed drug administration rituals drugs were shared. The drug sharing ritual can be witnessed in many forms. Some approach the formal Durkheimian format (13), others resemble more the daily encounters or interaction rituals (21) Goffman referred to and Collins called natural rituals. (2) In the following examples the different forms can be observed.

The first example was recorded at the madhouse, a squat named so by its regular visitors. Until short for its demolition, the place was inhabited by a transient group of older IDUs without regular housing. Harrie was one of the few people who lived on a permanent basis in the place and served as a manager:

When Ronald and Frits entered the room they had just bought drugs at another address. They wanted to shoot up fast. Frits took his spoon and lemon and put the spoon on the table. He then dribbled some lemon on the spoon. Ronald took two little paper packets out of his wallet. One contained two stripes of heroin the other contained one stripe of cocaine, as Ronald said later. Meanwhile Frits got a fresh syringe. In the house there mostly is a box of syringes and a sharpsafe container available. Frits went to a jerrican with water and with the syringe (without the needle) he pulled up some water. Then he poured a bit on

the spoon. Ronald had already opened up the packets and put \pm half of the heroin in the spoon. Frits heated the spoon with a disposable cigarette lighter. After the heroin had dissolved he stirred the solution with the safety cap of the needle. Then Ronald threw all of the cocaine into the heroin solution and stirred again. After removing the needle, Frits drew up the mixture with his syringe through a piece of kleenex. He put the needle back on and gave it to Ronald. Ronald fetched another syringe, took off the needle, redrew the piston and put the needle of the loaded syringe through the hub of the empty one. He then squirted about 1/4 of the solution into the reservoir. After putting the needle back on he gave the syringe to Harrie who offers them and other people facilities for shooting up and dealing. Ronald then repeated his action, using again a new syringe, but now he divided the remaining 3/4 into two even portions. One for Frits and the other for himself. Then they all took the fix.

As usual, Ronald and Frits share their jointly bought drugs. They inject a mixture of heroin and cocaine. Preparing a heroin/cocaine cocktail is a multi-stage and highly determined sequence, which requires a sufficient level of concentration and skills. One clumsy move and a shot can be spilled. Many users do not want to be disturbed while preparing a shot. Ronald and Frits conversely, prepare the shot together. Frits does the actual cooking, but Ronald determines how much heroin and cocaine is put in the shot and divides the solution. Frits carries the cooker and the lemon and Ronald carries the drugs. Moreover, Not only in the way they prepare and use them, but also in the way they buy drugs Ronald and Frits have a stereotypical pattern. Four weeks after the above observation one of the researchers was on a dealing address, observing the drug sales and use. There he ran into Ronald and Frits again:

Frits and Ronald came in. They came to score but Ronald started to talk to the researcher. After a few minutes, Frits, impatiently, took Ronald's wallet out of his hands. Then Ronald (a little agitated) said to Frits "As long as you know that it is my wallet." On asking, Frits replied that Ronald always buys the dope and he himself prepares the shots.

Ronald and Frits must be very confident about each other's actions. They perform the preceding preparation sequence with an explicit labor division as can be seen in the schematic breakdown of the sequence.

Figure 9.3

During this sequence there was hardly any conversation, no waiting or commands. They were both completely focussed on the task at hand. There was absolutely no ambiguity about the roles and tasks and both were well aware and certain about their own and their partner's role and focus. During the sequence they share one predominant goal --getting high. They can be said to share a common mood or emotion. Such a strong mutual focus of attention, without ambiguity or uncertainty about each other's role, combined with a common emotion are thought to be key ingredients of ritual, having a strong binding effect. (2)

And, in fact, Ronald and Frits have a strong and enduring relationship. They are a typical dyad or running mates --"a partnership of two best buddies or lovers, in which both participants implicitly understand the common benefits of the partnership". (22 23) Ronald described his relationship with Frits as follows:

"Frits and I are almost always using together, we do everything together. We are like brothers to each other, he is my half brother you know." "He is 41 now and I am 37; my father had a bit on the side then." "We don't share needles but I don't mind using the same spoon cause I'm sure that he won't share with someone else." "We're always together except when one of us is in jail."

Their common activities and the synchronicity of intense emotional experiences, such as drug induced euphoria and withdrawal secures their strong positive relationship. (19)

In the next fieldnote drug sharing takes a much more casual shape. The observation is recorded on a dealing address where a group of chasers was sitting around a table in a relaxed and sociable atmosphere:

Around the table are sitting three Moroccan males and the dealer. They are chasing some heroin. On the table are a roll of aluminum foil, several lighters and a teaspoon with a white residuum on the edge. It is

used to prepare cocaine for smoking, but currently only heroin is smoked. Then two other Moroccans enter the room. They greet the other present Moroccans and start a conversation in Arabic. One of them buys heroin ... and starts preparing for chasing. He does not have a knife and borrows one. With the knife he takes some heroin from the pack and puts it on his friend's aluminum foil. He also gives a little to the other men at the table.

At first hand this may seem an everyday and casual situation, but it has some definite ritual aspects. The ritual interaction in this fieldnote centers around two behavioral sequences directed at regulating the group interaction--the greeting and the sharing of drugs. The greeting ritual is a formal communicative procedure (24) and opens "a channel for communication and interaction" and it "defin[es] role and status", (25) in this case at an equal level. A conversation is started --a controlled and regular social situation (24) -- and one of the newcomers buys some heroin. He not only shares his heroin with his friend that came in with him but also with the others at the table. By sharing with the men at the table, the generous donor consolidates the good atmosphere, and shows that he respects them and in turn is worthy of respect. (21) The situation equals that of the familiar situation of giving a round in a cafe. As in any group, among drug users rituals are also directed at the regulation of normal day-to-day interaction under the given circumstances. (21)

Instrumental Functions of Drug Sharing

As in solitary drug taking rituals, much of the drug sharing ritual is also aimed at controlling the drug experience. The maximizing the drug effect function is expressed in pooling money and buying drugs in groups of two or more people. This is a regular practice among dyads and other friendship groups but sometimes this is also done by strangers who hook up temporarily for this purpose. In the following fieldnote a man ringed at a house where he thought to find a dealer. Jack, who squatted the place to sleep in tells him that the dealer has moved. Jack continues:

"But I know an other address. What do you want to buy ?", he asks the man. "I want to buy some heroin for '25.-" the man replies. Jack says "I've got some foreign bank notes, pounds, dollars. When I bring you to

the address can you buy a 'kwart' (quarter gram) for 35.-? Then I'll give you the bank notes. The man agrees to buy a quarter and they leave together. ... At the address the man buys a quarter gram of heroin and divides the package in about 1/3 for Jack and 2/3 for himself.

In the Netherlands the illegal market in heroin and cocaine is not only dominated by the market mechanism at the higher levels of trafficking, but also at the street level. Therefore, pooling money results in more drugs for the same amount of money. The drug sharing ritual is frequently aimed at preventing withdrawal. This is a common practice and users refer to it as helping one another.

Achmed tells he's sick and asks Nadir if he got something for him. Nadir says he's sick too and wants to use: "I'm not really sick yet, but it's pulling me. If you know a good address we can go there together and I will help you".

One helps a fellow user who is in need of a dose with a *betermakertje* (a little straight maker - -a small dose to ameliorate withdrawal). The term *betermakertje* is mostly used when asking a favor from a dealer. Helping does not only refer to preventing or ameliorating withdrawal, it can be extended to maintaining the desired level of intoxication. During the entire period of fieldwork the research team met few users in a clear state of withdrawal and it was observed that helping also referred to sharing cocaine.

The young man prepares the cocaine and shares it with his mate. One of the other men at the table who just finished his cocaine, asks him "Kun je een puntje voor me missen?" (Could you spare me a knife tip) The young one excuses himself for being not able to help him. But one minute later he grabs a knife from the table and takes a little bit of cocaine base of his foil to put it on the foil of the guy who had asked for it, saying: "Sorry, I can't miss more, we already have to smoke from it both".

Rules of Sharing

Analysis of the observed drug sharing rituals shows that drugs were shared for several reasons, inherent to life in the drug subculture. Drug sharing is not only a ritual but also the rule among the research participants. The rule regulating the sharing of drugs can be broken down to the following subset of sharing rules:

1. Share drugs with your partner(s), friends and acquaintances.

The drug users that shared drugs were in most cases in some way related to each other, but the ties relating them often varied in strength and content. In 68% of the observed drug sharing events, they were mainly related through participation in the regular drug taking activities, as for example buying and using at the same dealing addresses (N = 93). At dealing places users meet friends and make new contacts. Moreover, the relations were often much more intense and multiplex, that is, drug users did not only frequent the same places to use and buy drugs, but were in more aspects related to each other. For example as sexual partners (9%), family (9%), or they lived in the same, sometimes squatted, house (5%). 23% of the sharing IDUs were involved in a dyadic relationship.

2. Share drugs with sick users; help them with a *betermakertje*

Although mostly practiced among friends and acquaintances, this rule takes drug sharing beyond the group of known users. It shows that knowing each other is not a condition per sé for drug sharing as the next gloss indicates:

"I met Karel last week at the Salvation Army. I didn't know him. But I was sick (in withdrawal) and he helped me out with some 'bruin'. That never happened to me before, a perfect stranger that's willing to help me."

Helping is a very strong rule. Even when one is not very eager to help a certain person, as the following excerpt depicts:

Jack starts to prepare a shot. When he is almost ready, Cor asks him for a little bit of the dope. first J. does not respond, but Cor persists: "Ah, Come on J. just give me a few drops" Jack does not seem pleased with the situation, but when he draws his shot through the cotton he does not take all the solution from the spoon and pushes the spoon to Cor.

The strength of this rule is demonstrated by the observation that some users actually procure the main part of their drugs by asking favors of fellow users, appealing again and again to the internalized rule that one helps a sick addict. However, only few of them are able to maintain the delicate balance. Sooner or later it will become obvious to their donors that they break rule three.

3. I help you now, later you will help me

Users help each other, expecting to get the same treatment when they need help themselves. A user who regularly shares some drugs with others has a larger chance of being helped than a user who is stingy with drugs. The reach of rule two is limited by the expectancy of reciprocity. Former reciprocity is often used as an argument when asking for a favor.

4. Share drugs in exchange for services

In the first situation presented above, besides splitting the drugs they bought together, Ronald and Frits share with Harrie, who offers them the facility to inject and gave them new syringes. They do not pay an admission fee for using his facility, nor do they pay for the syringes. However, they give Harrie a taste of their jointly bought drugs and doing so they follow rule four. Frequently users provide each other with small services in exchange for drugs or other services. Permitting other users to use in ones house is a frequently observed example. In general, these exchanges go without negotiations or explicit agreements. Providing services to others is for some users an important source of drugs, necessary to support their habit. Likewise, many users find ways to make some drugs working in various positions for a dealer --as doorman, security or go-for.

5. pleasing the dealer

When purchased drugs are consumed at the place of purchase, smoking users often share a little with the dealer. They put a knife tip of heroin or some cocaine base on the dealer's smoking foil. The aim of this gesture is to maintain a good relationship with the dealer in the hope that he will be considerate in times of short finances by giving a *betermakertje*. Some users, however, object strongly to this practice, such as Arie, an older IDU:

Arie says he would never beg a dealer for a little more dope. "[T]hat's against my feeling of self-respect, ... you got to take care for yourself.

Some people will do almost everything to get the sympathy from the dealer, hoping they will get some privileges out of it, like buying on credit, getting good bags, some extra dope for free, etc. Some dealers exploit their position, they act like if they were God himself."

6. If you share, do it well

When drugs are shared, the donor must share in a way so that the recipient gets the impression that he is taken serious, as can be witnessed in the next fieldnote:

Before he goes on, he takes a little cocaine base out of the package he made, and puts it in another paper to give it to Lottie. When Lottie sees the little bit in the paper her eyes seems to shoot fire. Lottie: "You want to give me that. You insult me with that. If you can't miss anything today then say it to me, but don't give me this." The man says he is sorry and he will make it up with here next time.

Sometimes, appeals to share drugs are made when the user, who is being asked, feels he can not possibly help, as he does not have enough drugs or money. Then elaborate explanations are given why one is unable to help:

Numa asks Paco for his opinion, "What do you think Paco, last time I met him (he's pointing at a Moluccan user of ±35 years who is walking towards them.) I had Coke and enough money. He asked me to help him, which I did. Now he's asking again. I've got some Coke left but I'm out of money. So do you think it's strange I can't help him now." Paco first answers he does not want to interfere, but then he says "it's your business if you want to help someone or not, you know what you've got and what you can do with it." Numa turns to the Moluccan user and says "you see, he understands why I can't help you today. You know yourself, when I can, I will help you, you saw that last time. So don't be angry with me, you make me feel guilty." The Moluccan user answers "yeah, yeah, I understand ..."

That unanswerable appeals to share elicit feelings of guilt is a strong indication of the power of the sharing rule. However, the sharing rule is, at times, broken, as are other

rules and behavioral codes. Many drug users at times engage in behavior in which they not only violate the rules and laws of the dominant culture, but also of their own subculture. But it is insufficient to simply remark that drug users engage in such rule breaking behavior as they are not the only group in the population in which this phenomenon occurs. "Situational exceptions to idealized cultural standards can frequently be observed throughout various sectors of the population ... and [t]hese moral dynamics are not, of course, limited to the experience of drug users." (26) Such moral division of labor is also observed in the legal and medical professions where, because of the relative differences in status, some lawyers and physicians do the dirty work while others of higher status do not and may even condemn such activities. (27) "The credibility of the system of ethics embraced by street drug users cannot be measured by absolute behavioral conformity any more than the credibility of business ethics can be assessed in terms of the absolute absence of fraud." (26) "The concept of norm ... does not require a correspondence between what persons say and what they do; discrepancies are to be expected. ... [B]ecause norms identify behavior that ought or ought not to occur, behavior may (and often does) depart from norms. ... The more relevant consideration includes the conditions under which this potential for deviance is realized and the conditions under which norms guide specific conduct." (28) Therefore, the circumstances under which the embraced rules are violated and the judgments drug users themselves hold regarding these violations are of equal importance.

As the last example showed, a refusal to share is acceptable if one is unable to share (i.e. one has a low availability of drugs and money). When one is perceived as being able to share, however, a refusal is condemned and may put pressure on a relationship:

About a week or 3 ago I was here with Harrie. He had one stripe of heroin left, his last one. He wanted to share it with me. Then, last week, I was a little bit sick and I asked him a 'betermakertje'. Meanwhile Harrie had started dealing. Then he says to me, "Sorry Arie, I can't do it now, I only have seven grams left."

Harrie's position and with that his relation with Arie has, however, changed when he started dealing. Dealing is not an easy occupation. Not only must a dealing user stay

out of the hands of the police and hire a doorman and (body)guard to prevent rip-offs, he also has to manage the very frequent demands of customers for credit, *betermakertjes* and other favors. Dealers are often wangled by customers who are short of money. But they must control their financial balance and anticipate the financial credibility of their customers. Otherwise they are quickly out of business. At the other hand, they want to stay on good terms with their peers. This makes dealing a stressful activity and only few users manage to stay in business for extended periods of time.

The ability to conform to the rule of sharing is to a great degree dependent on drug availability. (26) Drug availability is, however, a relative notion, dependent on ones position in relation to the drugs and the perception of this position by the persons involved.

Symbolic Functions of Drug Sharing: Effects on the Social Consciousness

These drug sharing rules are all expressions of the almost universal subcultural code of share what you have. (29) And indeed, the data provide a broad pattern of sharing behaviors. The stereotype of drug users is that of ripping each other off as predatory individuals. While this behavior does indeed occur, a more prevalent pattern seems to be sharing. The drug users in this research shared many valued items such as housing, food, clothing and money. Often they helped one another with daily problems associated with drug user life. For instance, homelessness is not uncommon and in some of the places visited for this research several homeless drug users were given shelter for a shorter or longer period. One other such problem is that many IDUs suffer from collapsed veins and abscesses due to insufficient hygiene. Some insist on injecting themselves, others are happy to get help from another, often experienced injector, such as the following fieldnote shows:

A woman and her partner have just bought drugs and are shooting up. Both don't have an easy job. The man is trying several spots to shoot up. She also tries more than one spot and finally she asks Ria to do it. Ria takes the syringe, looks carefully at the females arm and sticks in the needle. Then she redraws the piston a little and blood runs in the syringe. She has hit a vein. After seeing the blood she presses the

piston, takes out the syringe and hands it to the woman. Shooting up the woman took her very little time and she looked like a professional nurse doing her daily work.

In contrast with similar American examples involving house doctors or professional hitters in shooting galleries, there is no commercial trade off in this service. (18 19 30 31) Sometimes, users ingest more drugs than their usual dose and slip into a deep nod which can end in overdose. They then depend on the safeguarding of a fellow user, like in the next situation:

In Gus' house are Ria Vis and Jerry, Gus just left to do some shopping. Ria is asleep in an armchair. "She has swallowed pills", Jerry says, "she is 'out' now." A Little later Ria Wakes up a little. "It's alright Ria just go nicely asleep." Jerry says to her. Jerry is staying with her to take care if anything should happen.

It is clear that the sharing of drugs is an important element of a broader pattern of social interaction in the drug subculture. Besides the instrumental functions, described above, drug sharing is a way to socialize and to (re)establish relations in the drug scene. In the next example, Harrie was just ejected from the crisis center, after a stay of three and a half weeks. He drew some money out of the bank, bought drugs and went to Karel's place, where he lived before he went into the crisis center:

"I left for Karel's place to take a shot and to surprise Karel with a little cocktail as well. He was still a sleep when I came in and was happily surprised to be wakened up for a cocktail."

By sharing drugs with Karel, Harrie expresses not only that he is back, but also that he is a generous and trustful member of the community, who is aware of his obligations to his friends and fellow users; their common bond is renewed and their group sentiments are reinforced. (32)

Drug sharing plays a crucial role in the social organization of the drug subculture. This observation is not unique as it was also found in other research. (33 34) For example, Sandoval found sharing of resources, such as cars, food and drugs to be a common practice among a group of "heavy polydrug users": "Customarily when one

user had a large supply, he would share with his friends as an investment for the times when he had none available. Even the dealers who made their livelihood selling drugs were not rigid. They often gave their friends free drugs." (34)

The important part drugs play in ritual is not limited to users of illegal drugs in modern western society, as in some studies of non-western, not primarily drug-driven, cultures, the sharing of drugs is also a main feature of social ritual. (35 36) What these traditional cultures and the drug subculture have in common is that they all live under harsh and demanding circumstances in which valued items are often scarce. (5 33 35 36) The lives of the members characteristically "oscillate between states of extreme mental dejection and extreme mental joy. Crises, calamities and disappointments of numerous sorts which are ever occurring ..., tend to disrupt the normal functioning of life and create a veritable condition of social dysphoria. Rituals on such occasions serve to counterbalance the disturbing actions of these adverse circumstances and restore social euphoria." (32)

The regular performance of the drug sharing ritual ensures continuity and smothers social conflicts that are often based on controversies of material origin (money, drugs or other valuables). (32 37) The elemental interaction pattern which is reflected in the drug sharing ritual is the reciprocal exchange of valued items among members of the same group. (36) This leads to the transformation of a multitude of individuals into an effective, relatively stable and cohesive social structure.

According to Collins "sharing a common mood or emotion" is a basic ingredient of ritual. (2) This means that sharing the drug high by sharing drugs is a fundamental condition for "drug use as a ritual event" as sharing is a requirement for the development of just that characteristic behavioral sequence which all definitions have in common --mechanical, stereotyped, repetitive, stylized actions. Sharing drugs results in sharing the common mood of the drug high, "an experience or knowledge which cannot be shared or transmitted during the course of ordinary social interaction. Sharing drugs has created a special bond similar to the bond created in the ritual context". (5) "Drugs also give the users a feeling of identity and a common bond ... and [this bond] acts as a strong supportive system for its members." (34) Because drugs are shared and ritualized, they have become a potent binding force. (35) Drug sharing not only helps to maintain the psychopharmacological balance, but serves an essential purpose in defining the social space drug users live their daily

lives in --it separates the in-group from the out-group. (38) Labeled as structural outsiders and ostracized by mainstream society drug users have become mutually dependant for fulfilling basic human needs. As one of the research participants expressively phrased it:

"We help everybody here, black, white, red, yellow, we don't have apartheid here. What would become of us if we don't help each other, no one else does".

Of course, not all users at all times behave conform these community positive rules and rituals. Often they are broken. Users cheat each other, rip off their dealing peers or steal money and drugs. These community negative behaviors are often the subject of savage gossip. As Faupel explained, lack of conformity to subcultural norms is most evident in users with limited structuring of daily life and a reduced drug availability. (26) Such situational ethics are, however, not unique and have been documented in several other areas and social groups. (39 40 41 42) But the failure of drug users to "consistently maintain ethical integrity is commonly understood to be evidence for a lack of any normative sensitivity whatsoever". (26) As a result, some clinical psychiatrists termed drug users "extremely egoistic cannibals" whose "negative, undesirable, destructive, learned behavior" is caused by a junkie-syndrome that overrules all other behavior. (43 44 45) However, similar to Fiddle's observations of law enforcement personnel, (46) clinicians generally see drug users at their worst. Their observations are confined to drug users in clinical settings, users who applied for treatment because they could no longer manage their drug use. Furthermore, and this also applies to the negative opinions of drug users regarding their peer's behavior, norm conforming behavior is usually taken for granted, while it is the deviations from or breaches of the norms that leave the strongest impressions. The findings of this study underline the limitations of such observations. Junkie behavior is certainly an integral part of the daily experiences and behaviors of drug users and many experience a feeling of mistrust, but a subculture cannot revolve around merely negative relationships. Positive relationships and interpersonal trust are essential for its maintenance. (19) These are generally ritually confirmed and reinforced by shared use of drugs --the instrumental imperative of the subculture. (9)

This balance between positive and negative behavior is dependent on the perceived drug availability. With a sufficient availability positive relationships can be maintained with a considerable number of other drug users. When availability decreases this number will shrink to a small core around the individual and users will less often share the drugs they crave.

Craving for altered states of consciousness has been termed a universal human condition comparable to the other primary drives. (47) Just as with food, drink and sex, the acquisition and use of drugs is thus of essential importance in the fulfillment of this primary drive. Likewise, food, drink, sex and drugs have all served a major role in social ritual throughout history. Sharing these items brings people together and strengthens mutual ties. It can therefore be argued that drugs have intrinsic or primary ritual value for biological and social reasons. When drugs are shared, this generally fulfills the requirements for ritual (prescribed psychomotor sequence, special meaning). The from drug sharing resulting common mood -- the drug high-- satisfies desires for intimacy, social solidarity and harmony. As a result, drug sharing is a reinforcement of group identity and group cohesion, resulting in the maintenance of the drug using network, and ultimately, the drug subculture. As the survival of the tribe is an intrinsic goal of all forms of human organization, use and sharing of drugs is a fundamental (and normal) human behavioral expression.

References

1. Durkheim E: The division of labor in society. New York: The Free Press, 1964.
2. Collins R: Towards a neo-Meadian sociology of mind. *Symbolic Interaction* 1989, 12(1):1- 32.
3. Bourguignon E: Altered states of consciousness, myths and rituals. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 7-24.
4. Guanon R: Introduction to the study of Hindu doctrines. London: Luzac and Co., 1945.
5. Cleckner PJ: Cognitive and ritual aspects of drug use among young black urban males. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 149-168.
6. Zinberg NE: *Drug, set, and setting: The basis for controlled intoxicant use*. New Haven: Yale University Press, 1984.
7. Harding WM, Zinberg NE: The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 111-134.

8. Radcliffe-Brown AR: Structure and function in primitive society. London: Cohen and West Ltd, 1952.
9. Malinowski B: A scientific theory of culture and other essays. New York: Oxford University Press, 1960.
10. Goffman E: Stigma: Notes on the management of spoiled identity. New York: Simon and Schuster, Inc., 1963.
11. Becker HS: Outsiders: Studies in the sociology of deviance. New York: The Free Press, 1973.
12. Wallace AFC: Religion: An anthropological view. New York: Random House, 1966.
13. Durkheim E: The elementary forms of the religious life. London: George Allen & Unwin LTD, 1971.
14. La Fontaine JS: The interpretation of ritual. Introduction. London: Tavistock, 1972.
15. Engelsman EL: Dutch policy on the management of drug related problems. *British Journal of Addiction* 1989; 84:211-218.
16. Engelsman EL: Drug misuse and the Dutch: A matter of social wellbeing and not primarily a problem for the police and the courts. *BMJ* 1991; 302:484-485.
17. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. *Am J Public Health* 1990; 80:150-152.
18. Murphy S, Waldorf D: Kickin' down to the street doc: Shooting galleries in the San Francisco Bay Area. *Contemporary Drug Problems* 1991; 18(1): 9-29.
19. Des Jarlais DC, Friedman SR, Strug D: AIDS and needle sharing within the IV-drug use subculture. In Feldman DA, Johnson TM (eds.): *The social dimensions of AIDS*. New York: Praeger Publishers, 1986: 111-125.
20. Carlson KA: Identifying the stranger: An analysis of behavioral rules for sales of heroin. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 191-206.
21. Goffman E: *Interaction ritual: Essays on face to face behavior*. New York, Pantheon Books, 1967.
22. Feldman HW, Biernacki P: The ethnography of needle sharing among intravenous drug users and implications for public policies and intervention strategies. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 28-39.
23. Preble E, Casey JJ: Taking care of business - the heroin user's life on the street. *Int J Addict* 1969, 1: 1-24.
24. Firth R: Verbal and bodily rituals of greeting and parting. In: La Fontaine JS (ed.): *The interpretation of ritual*. London: Tavistock, 1972.
25. Goody E: Greeting, begging and the presentation of respect. In: La Fontaine JS (ed.): *The interpretation of ritual*. London: Tavistock, 1972.
26. Faupel CE: Drug availability, life structure and situational ethics of heroin addicts. *Urban Life* 1987; 15(3,4): 395-419.
27. Hughes EC: *The sociological eye: selected papers*. Chicago: Aldine- Atherton, 1971.
28. Meier RF: Norms and the study of deviance: a proposed research strategy. *Deviant Behavior* 1981; 3:1-25.
29. Wieder DL: Telling the code. In: Turner R (ed): *Ethnomethodology: selected readings*. Middlesex, England: Penguin Education, 1974, pp 144-172.
30. Stern LS: Self-injection education for street-level sexworkers, In: O'Hare, P., Newcombe, R., Buning, E., Drucker, E., Matthews, A. (Eds.) *Reducing the Harm from Drug Use*. London: Routledge, 1992: 122-127.
31. Sterk CE: *Living the life: Prostitutes and their health*. Ph.D dissertation Rotterdam: Universiteitsdrukkerij 1989.

32. Nagendra SP: The concept of ritual in modern sociological theory. New Delhi: The academic journals of India, 1971.
33. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 137-148.
34. Sandoval MC: Patterns of drug abuse among the Spanish-speaking gay bar crowd. In: Du Toit BM (Ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 169-187.
35. Carter WE: The Aymara, and the role of alcohol in human society. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 101-110.
36. Partridge WL: Transformation and redundancy in ritual: a case from Colombia. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 59-74.
37. Turner VW: Dramas, fields and metaphors. London: Cornell University Press, 1974.
38. Becker HS: Outsiders: Studies in the sociology of deviance. New York: The Free Press, 1973.
39. Deutscher I: Words and deeds: social science and social policy. Social Problems 1966; 13: 235-254.
40. LaPierre RT: Attitudes vs. actions. Social Forces 1934; 13: 230-237.
41. Warriner CK: The nature and functions of official morality. American Journal of Sociology 1958; 64: 165-168.
42. Becker HS, Geer B: The fate of idealism in medical school. American Sociological Review 1958; 23: 50-56.
43. Epen JH van: Wat doen mensen met mensen? In: Heroïneverstrekking als alternatief voor behandeling: Verslag van een tweedaagse conferentie. Amsterdam: SKS, 1977; pp 4-8.
44. Epen JH van: Drugverslaving en alcoholisme: diagnostiek en behandeling. Amsterdam: Elsevier, 1983.
45. Noorlander EA: De doelgroep van P3. In: Mol A, Majoor B, Malinowski H (eds.): Junkies little helpers. Rotterdam: STOP, 1982.
46. Fiddle S: Portraits from a Shooting Gallery. New York: Harper and Row, 1967.
47. Siegel RK: Intoxication: life in pursuit of artificial paradise. New York: Pocket books, 1990.

Part II: Drug Use Rituals, Health Problems and Drug Policy

HEALTH CONSEQUENCES OF CHASING AND INJECTING: A COMPARISON

Contents

Introduction

Overdose

Physical Harm Related to Regular Use of Illicit Drugs

Communicable

Discussion

References

Introduction

Drug use affects the human organism in several ways. A division can be made between psychoactive effects such as changes in perception, cognition, affect, and levels of anxiety or inhibition, and physical effects like increased or diminished heart function, lung function and muscle tension. It is primarily the former effects which make drugs desirable, and are a major reason for their use. Some of the physical effects --enhanced and/or enduring bodily performance from stimulants; muscle relaxation and/or sleep from tranquilizers-- are sought as well.

These psychoactive and physical effects are influenced by the dose, administration mode, psychological and/or physical condition of the consumer, and the social environment in which drugs are taken. (1) Many of the physical effects are termed -- because they are secondary to the intended effect-- "side effects". Prolonged, and in some cases single, exposure to drug effects may result in harm or impairment. Some harm relates less, if at all, to the ingested drug itself, than to drug impurities; the mode of administration; or the circumstances in which drug use takes place. Because of the illegal nature of most drug use, and the resulting insecurities regarding the composition of the ingested substance, the actual cause of harm is often unclear.

This chapter will focus on the physical consequences of illicit drug use. More precisely, specific health consequences of the prevalent drug administration rituals will be compared. This comparison will not be extensive, and for the most part limited to injecting and smoking, particularly chasing. The risk of (fatal) overdose and other

physical harm will be considered. Communicable diseases, such as hepatitis and HIV, will be only briefly addressed as there is little data available to compare the two administration modes. The chapter will conclude with a reflection on the relative safety of the different modes.

Overdose

Opiate Overdose

Among drug users, death by overdose is generally linked to the opiates, particularly heroin and methadone. The classic depiction of an overdose involves opiate ingestion in an amount exceeding (individual) tolerance with resulting respiratory and central nervous system depression; miosis (pinned pupils); and consciousness levels anywhere from sedation to coma. Whether or not this "pharmacological overdose" is responsible for all deaths which occur following heroin administration has been questioned. Alternative hypotheses regarding allergic reactions, (2 3) toxic effects of heroin (4) or its diluents (5 6 7) and drug interactions, with particular reference to alcohol, (2 4 8) have been formulated. In an overdose study from Denmark, alcohol was a contributing factor in 40% of the cases (39% of which were due to morphine/heroin, injected 67% of the time). (9) A study of US soldiers stationed in Europe found that most "overdoses" were among experienced drug users who took (87% by injection) a familiar amount of heroin after a night of drinking, went to bed drunk, vomited in their sleep and aspirated some of the vomitus causing fatal (or near-fatal) asphyxiation. (10) In a Swiss retrospective study of emergency room admissions for overdose, the vast majority were attributed to heroin, but mixed poisonings, in which heroin was most commonly combined with flunitrazepam and alcohol, contributed to the clinical picture. (11)

A recent Amsterdam study applied the descriptive term, "sudden death after drug use." (12) This retrospective study of 175 lethal overdoses divided victims into two groups: persons who died shortly after their arrival in Amsterdam (almost all non-Dutch tourists), and those who had resided in Amsterdam a long period before death. Following Ruttenber and Luke, (6) the overdoses in the former group were classified

as epidemic pharmacological overdoses -- tourists not accustomed to the higher potency of Amsterdam's heroin. The deaths among the resident group were classified as endemic; caused not so much by potency but by coincidence with other factors, such as additional drug use. (12) Poor physical health, a possible co-factor, was barely addressed. A recent German study related the increased number of local drug deaths (of whom 75% suffered inflammatory diseases and 15% were HIV seropositive) to a rise in purity and availability of heroin. The authors stated, "[t]he 'supply' of heroin has apparently become so copious that nearly all deaths are caused by overdosage with this substance," (13) thus suggesting pharmacological overdose. But, as the Amsterdam study shows, purity in and of itself, and high availability, are not sufficient explanations. The large number of foreign overdose fatalities in Amsterdam (64%) suggests a lethal combination of low tolerance and ignorance of (rising) drug purity levels. It can therefore be ascertained that (pharmacological) overdoses are more likely to occur at the start of a period of increasing purity (or) when purity is highly unstable.

Administration Ritual and Overdose Prevalence

A look at the administration ritual involved in overdose is interesting. While deaths due to oral administrations of methadone, and a combination of codeine and glutethimide (a hypnotic) have been reported, (14 15 16) the majority of illicit drug overdose studies refer to injected drugs. In the Amsterdam study, the mode of drug administration utilized prior to death could only be determined in a minority of cases. Only 54.3% of the autopsy reports mentioned signs of recent injecting. In 29.1% of the cases this could not be established, and in 16.6% this information was missing (N = 175). Testimonies were available in 42 of the heroin use prior to death cases. Among 34 (81%) the lethal dose was injected, in four the heroin was sniffed and in only one case it was chased. In the three additional cases the mode of administration could not be ascertained. (12) Although these numbers are hardly generalizable, they suggest that, at least when considering overdose, chasing is a low-risk administration ritual. This suggestion is supported by the relative absence of Surinamese and Moroccan users among the deceased (less than 6%, N=175). The prevalence of injecting in these user groups is very low, about 4%, in contrast with 37% of Dutch users and 67% of the foreign drug users in Amsterdam. (17) The likelihood of this

suggestion is further confirmed by data from Rotterdam. Table 6.1 (chapter six) shows a similar injecting prevalence in Rotterdam --4% of the Surinamese and 6% of the Moroccan users in the ethnographic sample injected, in contrast with 43% of the Dutch. Nonfatal overdose of Rotterdam methadone clients is registered in the Rotterdam Drugs Information System (RODIS). In 1988, 27% of all methadone clients had a lifetime prevalence of overdose, on more than one occasion in 30% of these cases. (18) In 1989, this percentage had fallen to 23% and the results were broken down by ethnic group: overdose prevalence was 29% among Dutch users, 6% for Surinamese and Antillians and 10% for Moroccans. (19) The author wondered if the Moroccan clients (and those from Suriname and the Antilles) used their drugs in a safer way, but as he found no indications of lower levels of heroin use, he doubted that moderation could be an explanation for their lower overdose prevalence. Unfortunately, data on the mode of drug administration is not registered in RODIS and as a result, differences of administration ritual were not considered. Had this been done, the relationship between the low prevalence of injecting in these groups and their lower overdose prevalence might have become clearer.

The speed with which a drug's effects become noticeable differs per administration ritual: oral ingestion is characterized by a slow onset, with a slight increase from sniffing, a more rapid effect from chasing, and injecting generally producing the most rapid effects. (20) An exception is cocaine, which reportedly reaches the brain even faster when smoked than by injection, although technique undoubtedly plays a role. (21 22) It should be noted that there is some variety within the specific modes as well: an empty stomach absorbs drugs quicker than a full one, intravenous injection offers more rapid delivery than an intramuscular or subcutaneous one.

Overdose potential however, does not so much depend on onset speed, as on the total amount of drugs ingested over a given time period. A lethal dose can thus be built up in more than one ingestion. (4) Although injecting heroin carries the greatest risk for fatal overdose, oral ingestion and sniffing probably compete for second place. This can be explained by the fact that these two methods work with a buffer; a certain quantity is swallowed or sniffed in one go, and then crosses the mucous membranes of the stomach or nose slowly but definitely. When chasing, while effects are felt more rapidly than when swallowing or sniffing, the drug itself is administered quite

gradually. Chasers reach their desired high by sequentially administering small quantities of the drug. In theory this could add up to a lethal dose, but in practice the chance seems small due to the steady and controlled titration inherent to this mode. Chasers may smoke themselves into a light state of unawareness --a nod-- but, as illustrated by the following statement, this gradual build-up normally prevents fatalities:

"When you nod, you nod. And you can't add on to that level anymore."

Moreover, when chasing, the actual absorption, or bio-availability, of heroin is much lower than when injecting, although this is dependent on the chemical form (hydrochloride or base) of the heroin, its processing impurities, diluents and the chaser's technique and skills. (23 24)

The theoretical possibility of smoking heroin from a "bong" --a pipe typically used to smoke cannabis or cocaine, with a chamber where smoke is collected and stored before it is all ingested in one inhalation-- as well as the anal route (suppositories, enemas), will be omitted from discussion because these methods are not prevalent in Holland.

Cocaine Overdose

Despite the assertion made in a recent publication of the Netherlands Ministry of Justice (25) there is an overdose risk attached to cocaine, and fatalities do occur. At the physical level, cocaine elevates (while heroin decreases) heart rate, respiration and blood pressure. Overdose of either drug has a profound effect on the central nervous system: cocaine's is stimulation (22) and heroin's, depression. (8) Crudely put, in a heroin overdose breathing stops and the victim turns blue; breathing might also stop in a cocaine overdose, but probably not until after the flushed victim experiences a "heart attack" or seizure. (26 27 22 28) The physical process responsible for the intense "rush" associated with injecting and smoking of cocaine, may cause overdose so rapidly that treatment is not possible. (22) A recent American study describes cerebral hemorrhage, acute cardiac events, and ruptured dissections of the ascending aorta directly related to cocaine. (29) This study, as many others, did not analyze the mode of administration involved, making comparison of smoking and injecting in fatal cocaine overdose impossible. But fatalities following recreational

sniffs, smokes, and shots of cocaine have been reported, and well as several in "body-packers". (27 30 31)

Nonfatal overdose

The Amsterdam study discussed above found only a small proportion of the reported overdoses ($\pm 10\%$) to be fatal. (12) Almost one in four clients of the Rotterdam methadone programs has experienced a nonfatal overdose, 38% more than once. (19) Overdose, thus, is not a rare phenomenon. Many (case) reports describe the clinical sequelae of nonfatal overdoses, which may induce considerable physical harm. Pulmonary edema is frequently related to non-fatal overdose of both heroin and cocaine. (32 26 33 34 35 36) Other disorders commonly associated with cocaine include (hemo)pneumothorax, pneumomediastinum and pneumopericardium; atelectasis (34 35 37) and diffuse alveolar hemorrhage. (38) Arrhythmias and myocardial infarction (in persons without coronary disease) have also been related to use of cocaine. (39 40) Non-fatal heroin overdose has been associated with acute renal failure caused by rhabdomyolysis, (8 41 42 36) acute transverse myelitis (43) and lesions of the central and peripheral nervous system. (36 44) Aspiration pneumonia, due to emetic properties of the drug itself plus impaired gag response common to heroin intoxication, is not uncommon. (8 36) Respiratory insufficiency caused by laryngeal edema has been reported, but is apparently atypical. (45) Allergic reactions, in one case to a first injection of heroin, (46) are suspected in a large number of these cases. (8 47 48) Less severe allergic responses with histamine production can be a nuisance or problem for injectors, sniffers, and smokers as will be illustrated in the following section. (49)

Physical Harm Related to Regular Use of Illicit Drugs

Intensive and prolonged use of heroin and cocaine in non-toxic doses has also been related to several clinical syndromes. In the following, some of the consequences of smoking will be discussed, ensuing those related to injecting, and finally a brief overview of sniffing-related disorders.

Smoking

Most smoking related pathology concerns, not surprisingly, the respiratory system. Thai Opium smokers, even at 60 or 70 years of age, were found to be in surprisingly good health in a recent American Refugee Committee study. Their only noticeable

major complication, chronic obstructive lung disease, was thought to have been aggravated by tobacco smoking for which long pipes are utilized, requiring powerful sucking and presumably deep inhalation. (50) Heroin is the subject of only a few reports. Heroin inhalation has been related to cases of bronchospasm (51 8 52) -- possibly due to foreign body reactions and/or allergies to heroin or added cuts-- and airway obstruction. (53) The deleterious effects of heroin inhalation on the condition of asthma patients is described by one report, (54) but another suggests a temporal relationship between onset of asthma and heroin use, irrespective of administration route. (3) In 1981, a small 'heroin'-leukoencephalopathy epidemic in Amsterdam and some other Dutch cities caused the death or irreversible impairment of several chasers. (55 56) What precipitated the illness has never been resolved, but one hypothesis related the syndrome to the formation of a toxic compound from a combination of unknown cuts during pyrolysis (heating). This compound may have been toxic in itself or in combination with other compounds occurring in the heroin used. (24)

Since the outbreak of crack smoking in America in 1984, the medical literature has produced many (case) reports on the adverse effects of cocaine smoking. While the massive area of absorbent alveoli in the lungs make smoking an efficient way of administering any drug, cocaine can potentially reach the brain faster by smoking than by injection. (22) The difference in onset speed may be only a matter of seconds, but is an important consideration for some users. (In emergencies and sporting events a few seconds difference is of vital concern, and the pursuit of intoxication is viewed by some users as having elements of either. Or both.)

Disorders commonly related to crack cocaine smoking are cough (sometimes with production of blood and/or carbonaceous sputum), shortness of breath, and chest pain. (35 57) Radiographic abnormalities associated with these symptoms are apparently uncommon (34) but include those pulmonary disorders listed in the non-fatal overdose. (35 33 26) Certain euphoria intensifying procedures, such as the Valsalva maneuver, reportedly contribute to development of pneumothorax and pneumomediastinum. (58) One case report related freebase cocaine smoking to reactive airway disease, (59) but the specific inciting agent (cocaine, its diluents, freebase impurities or concomitant use of tobacco) was unclear. A study into the respiratory effects of cocaine freebasing among habitual users of marihuana with or

without tobacco, suggested that moderate cocaine smoking damaged both large and small airways, independent of concomitant marijuana use, but synergistic with the effects of tobacco. (57)

From these reports, it is not clear if disorders are solely the result of inhaling heroin or freebase cocaine vapors. Fumes containing unknown pyrolysis products from heroin cuts, from impurities of the freebasing process, or admixtures to the freebased cocaine provided prior to smoking, may also play a part. (24 59 3) In The Netherlands, most cocaine-smoking heroin users prepare base cocaine for smoking themselves, by heating cocaine hydrochloride with ammonia. The inhalation of ammonia residue may well affect the described states. Furthermore, chasing from aluminum foil, and smoking from a stem (a glass tube) with a steel wool or "brillo" filter, may lead to inhalation of metal (oxide) particles. The possibility also exists for upper respiratory problems secondary to the inhalation of excessive heat or butane from disposable cigarette lighters. (57)

Injecting

Medical reports of injecting related problems are myriad, and varied enough to present themselves to almost every discipline of medical practice. Clear relationships between cause and effect are sometimes presented. However, due to the illegal status and resulting covert nature of injecting drug use, such evident causal relationships are often not traceable. (60) The drug-specific, technique-specific and lifestyle-specific variables which impact on users' health can be teased apart only with difficulty, if indeed at all, and are frequently confused or combined.

In the injecting drug use culture, intravenous injection --although somewhat more difficult to execute-- is the norm. This extra effort pays off in faster delivery of the drug effect, and less of the local tissue damage which can occur when injecting relatively impure black market drugs intramuscularly or subcutaneously. (61 62 27) Much of the harm related to injecting drug use often results from a synergistic combination of limited needle availability, poor hygiene surrounding self-injection and inadequate injection technique.

Injecting with dull needles produces larger punctures than necessary, causing skin, tissue and venous scarring in regular or frequent injectors. (63) Repeated use of damaged sites and improper injection technique may result in abscesses, ulceration, venous scarring, and circulatory damage when veins "clog" (thrombosis) or collapse.

(64) Cocaine users are particularly susceptible to "missed" (outside the vein) injections due to the drug's local anesthetic properties. The same microscopic neurotransmitter effect responsible for cocaine's "freeze," cause peripheral veins and arteries to constrict. This decreases both flow of oxygenated blood to, and rate of absorption from, the injection site, increasing the chance of local tissue necrosis. (65 22) Edema --leakage of lymph fluid in the tissues-- commonly presenting as "elephant hand," is a consequence of too rapid introduction of (too much) liquid, misses, circulatory damage and over-used sites. This pool of fluid provides a favorable medium for bacterial growth, and is particularly susceptible to cellulitis. (66) Inept needle placement and manipulation may cause bone cells to grow on muscle fiber, resulting in hard tumorlike swellings (myositis ossificans); a phenomena referred to in one reference book as "drug abusers' elbow." (67) Because arterial blood leaves the heart under pressure and is housed in vessels with thicker muscle walls, arterial injections (usually accidental) are painful, require force, can cause severe bruising and, not infrequently, result in both "missed" injections and serious infections. (61 62) A tourniquet --employed to bring veins to the skin surface and facilitate injection-- used too tightly or too long leads, on short term to bruising, and on the long term to tissue damage which may be severe enough to cause gangrene. (68)

Unsterile skin, syringes, needles and other paraphernalia can introduce a wealth of infectious agents. (20 48) Blood-borne diseases such as viral hepatitis and HIV have received sufficient media attention to be linked to drug injecting by even a lay audience. Injecting traces of another person's blood is however, not the only risk. Organisms common to the skin surface can contribute to the development of bacterial infections. Endocarditis, because venous blood travels toward the heart taking any injected matter with it, is a particular risk. (69 48 70) Water used (among other things) to prepare drugs for injection may provide another source of bacteria, virus and other infectious agents. (71) Base "brown" heroin --ideal for smoking-- will not dissolve without the addition of an acid (commonly lemon juice, vinegar, or vitamin C powder), acids which can produce a certain amount of local irritation, even given a perfectly delivered injection. Lemon juice preparations are preferred by some to juice from real lemons; users' lore being that lemon fibers can cause blindness if they "get stuck" in the tiny capillaries of the retina. This is supported, at least in part,

by the research as several outbreaks of systemic candida infection, and candidal endophthalmitis causing vision damage or loss, have been linked to old, contaminated lemon juice. (72) Idiosyncrasies of technique, such as licking the needle prior to injecting, may in themselves be responsible for infection. Wound botulism, septic arthritis, tetanus, and numerous other diseases both exotic and mundane, have been associated with unsterile injection. (43 13 73 74 20)

Even skilled injectors with sterile equipment and skin cannot prevent injecting the insoluble (and/or harmful) diluents and impurities most black market drugs contain. Talc and cornstarch emboli of the retinal vessels, pulmonary talcosis, and some of the granulomas and abscesses injectors develop are directly attributable to drug cuts. (13 8 48) Quinine, a heroin cut some users favor for the mucous membrane tingle it produces upon injection, has been implicated in damage to cardiac, skeletal and smooth muscle, the gastrointestinal tract and kidneys, (75 76) local tissue destruction, idiopathic thrombocytopenic purpura, (8) and may contribute to toxic amblyopia. (77) Furthermore, it has been hypothesized that cuts are also at least partly responsible for some of the neurological lesions, neuropsychological deficits and immunological abnormalities associated with drug (usually injected heroin) use. (60 78 79 70) Small wads of cotton or cigarette filter, employed to eliminate or reduce the amount of insoluble cut and other undesirable substances drawn into the syringe, can host bacterial growth --particularly in locales where cuts include lactose or other sugars. (79) These filters, if prepared with unwashed hands, or stored and re-used in "hard times", provide an additional infection source. (71) And tiny filter fibers may be injected along with the filtered drug contributing to the cut-related conditions. (66) The role of "needle sharing" in disease transmission is understood, but not all aspects of injecting have been equally well researched. Hence, the absence of consistent health education protocols for some injection preparation sequences. For example, research on the role assorted filter materials and heroin-dissolving acids may have on injectors' health is lacking, and existing recommendations are inconsistent. (80)

Should venous collapse and scarring limit easily accessible injection sites, some IDUs terminate injecting. Others adapt by injecting under the tongue, in the temples, fingers, forehead, groin neck or other less conventional locations. Injecting in these sites requires a higher level of skill, and thinner or --in the case of groin shots, where the vein is often deep and not easily visible-- longer needles. Some professional

hitters or house doctors specialize in these spots. (81) A report linking attempted jugular injection with spinal cord injury --the Brown-Sequard syndrome-- implicates heroin, quinine diluent, or both as causal agent(s), not needle manipulation per se.

(82) Head and neck surgeons, reporting on the uncommon phenomenon of vocal chord paralysis following clumsy injections in the jugular vein, stated that common complications of this practice are cellulitis, abscess, venous thrombophlebitis and potentially, pulmonary embolism and pseudoaneurysm of carotid and subclavian arteries. (83) Additional complications --Horner's syndrome (nerve paralysis), and neck fibrosis- - have been described by other reports. (84 85)

Malnutrition, sleep deprivation, poor personal hygiene, high stress levels, inadequate shelter, and poverty --characteristics many heavy drug users share-- have a negative impact on the immune system and frequently exacerbate all the previously described conditions. (86 87) In addition, the pain killing and cough suppressing properties of opiates work to mask symptoms of existing illness or injury. Minor respiratory infections, dental decay, and other common maladies may progress without notice or attention, until action is demanded by their severity. (88) Dissatisfaction with, or fear of, medical institutions has an additional negative effect on users' health. Fear of dentists and doctors is by no means experienced exclusively by drug users, but analgesics make it possible for them to postpone treatment longer than most non-users are generally able. This practice contributes to the loss of teeth and physical attractiveness, the development of serious complications necessitating more aggressive treatment, and the negative attitude of health care personnel. (89)

"Addictophobia" is something all drugs users may be subjected to but, having more health risks and being more easily identified as illegal drug users, something to which (unskilled) injectors are particularly susceptible. It does not take much intuition to understand the role which being identified as a member of an, if not hated, at least not cherished minority, plays in presenting for treatment, or health status in itself.

Sniffing

Sniffing is the dominant mode of cocaine administration in western countries. (90) In NYC and other areas where heroin smoking is a relatively rare activity, sniffing is also a common mode of heroin administration, often preceeding injecting in a user's career. When a recent increase of NYC heroin sniffers was noticed, injection prevention/AIDS prevention interventions were designed and studied. (91) Anecdotal

reports trace this rise in heroin sniffing to cocaine smokers trying to curb the negative side effects of their heavy cocaine use. (92) Given the results presented in chapters five and seven, this may well be a factor.

Even excluding the risk of viral infection, the potential physical harm of unskilled sniffing is much lower than that of unskilled injecting, but not entirely eliminated. As might be expected, physical problems attributed to sniffing typically involve the nose and sinuses. While no significant relationship has been demonstrated between cocaine sniffing and either lung disfunction or respiratory symptoms, (57) it has been associated with several other disorders, the most common of which is chronic sinusitis. Others include chronic rhinitis, perforation of the septum (93 27) and altered appearance of the nose (saddlenose). (94) However innocuous it sounds, cocaine sniffers' sinusitis has reportedly lead to botulism, optic neuropathy (95 96 97) and one reported case of Pott's Puffy Tumor; a potentially life-threatening bone marrow infection. (28)

Cocaine has both anesthetic and vasoconstricting properties. Besides a characteristic "high," when sniffed it numbs the nose and throat, and decreases blood flow through the nose and sinuses. Both these properties are implicated in the case of Pott's Puffy Tumor. Nasal tissue damage, caused by multiple insertions of a straw through which cocaine was sniffed went unnoticed, and decreased blood flow created conditions supportive to bacterial growth; bacteria which then spread via the veins draining the sinus. The risk of sinusitis and septal perforation is apparently increased by concomitant use of vasoconstricting nasal-inhalers, which may also decrease oxygen tension in the tissues and facilitate growth of anaerobic pathogens. (98) Like the high, the "freeze" which is part and parcel of the effects of intranasal cocaine, is subject to reversal once the dose has worn off. The high has a well-documented rebound depression (99) and the freeze, a rebound congestion making nasal decongestants understandably appealing. These decongestants are however, also subject to rebound reversals (98) --a nasty irony as they apparently aggravate the very condition which they are used to relive.

Literature describing the physical sequelae of heroin sniffing was hard to come by, but chronic granulomatous rhinitis is mentioned by one report. (13) Rhinitis, characterized by vasodilation of the nasal mucosa, nasal discharge and obstruction, is a symptom familiar to every sufferer of hayfever and colds. Allergic reactions to

heroin have been well documented in overdose literature, and histamine reactions (itching, welts) are not unfamiliar to heroin injectors. It seems logical therefore, that similar reactions may occur when the drug is sniffed.

Rinsing the nostrils with water after use, and cautious, gentle insertion if a straw or tube is used, might prevent some of the harm caused when sniffing any drug.

However the risk of introducing non-sterile irritating matter (and in the case of cocaine, one which diminishes blood flow) into the nose, throat and sinus remains.

Communicable diseases

There is no data available in the Netherlands comparing injecting and non-injecting drug use with respect to communicable diseases. Therefore it is hardly possible to relate drug administration rituals to the prevalence of communicable diseases. In RODIS a few indirect measures are available, wherein the same procedure as in section 10.2 is followed. Groups in which the prevalence of injecting drug use is low (the Surinamese/Antillian and the Moroccan group) are compared with the groups in which drug injection is far more prevalent (Dutch and foreign users). The lifetime prevalence of hepatitis in these groups, as reported by RODIS, is as follows: Dutch 25%, Foreigners 25%, Surinamese/Antillians 10% and Moroccans 11%. (19) This supports the rather obvious assumption that chasers are at less risk for contracting blood-borne diseases. Some caution however: when lifetime prevalence of gonorrhea (Dutch 24%, Foreigners 19%, Surinamese/Antillians 31% and Moroccans 16%) and syphilis (Dutch 6%, Foreigners 11%, Surinamese/Antillians 10% and Moroccans 2%) are considered, the Surinamese/Antillian scores are considerably higher, with gonorrhea in particular. This may be indicative of a higher frequency of (unsafe) sexual activity. Use of cocaine in this group is higher than average, (19) and several American studies have found links between cocaine use and HIV risk behavior. (100 101 102 103 104) This relationship, in a recent study in Amsterdam however, was not found. (105)

Discussion

There is no clear evidence that, even after prolonged use, pure opiates in and of themselves cause physical damage. (106) But effects of drug combinations, diluents and administration techniques; "pre-morbid" status; and the sleep/wake cycles,

source and frequency of nutrient- intake, hygiene and housing quality, and other variables which have collectively become known as "lifestyle," create some distressing statistics. For example, "young opiate addicts" in one study had mortality rates an estimated sixteen times higher than age group norms. (107) Loss of fingers and toes to frostbite or infection is a common sight in some chillier or more ostracized IDU communities, and trackmarks are so solidly linked with needle use as to be used as proof of injecting --a requirement for getting supplied by many syringe exchange programs. (108 109 110)

While certain syndromes are related to administration mode and technique, the drug effect itself is responsible for others. Constipation and resultant hemorrhoids or fecal impaction associated with heroin use occurs irrespective of administration route. (66 70) Opiates decrease circulation, respiration, cough reflex and body temperature. (88 48) Given the conditions of inadequate housing and harsh winters, these factors increase the risk of pneumonia, frostbite and hypothermia. Use of tobacco, and the circulatory damage resulting from this and other activities, most notably injecting, add an additional physical strain. (88) Heroin-induced histamine reactions are not infrequently local --rhinitis after sniffing, itchy welts around injection site, and bronchial distress after smoking. As evidenced by field work in Rotterdam and New York City, histamine reactions are unpredictable. The same sample of heroin, used by the same individual in the same manner, may produce a histamine response on one occasion, and not on another. Because allergic responses to heroin are presumed to be responsible for a significant number of "overdose" cases, this unpredictability is a troubling finding. The appetite suppressing action of stimulants, and to some degree opiates, contribute (in combination with financial status and lifestyle factors) toward malnutrition and emaciation. Many psychoactive drugs cause "cotton mouth," and food particles tend to collect between the teeth and (less engorged) dehydrated gums. This makes scrupulous oral hygiene - -unfortunately far from commonplace-- a necessity if gum disease and tooth loss are to be avoided. Intoxicated female drug users may be troubled by inadequate vaginal lubrication, even during arousal. (111 90) Unless corrected with saliva or commercially available lubricant, this makes them more vulnerable to abrasion, infection and disease during penetrative sex. Stimulants are known to trigger yeast infections and herpes outbreaks in susceptible individuals, conditions which damage the integrity of skin

and mucosa, and further increase vulnerability to (HIV and other sexually transmitted) infection during sexual activity. Furthermore, stimulants may cause sudden elevations of blood pressure (88) with symptoms ranging from spontaneous nosebleeds to coronary collapse.

As has been well documented elsewhere in the text, drug use is a social activity. Both the drugs consumed, and their consumption style, are influenced to a great extent by (sub)cultural norms. In this chapter, an attempt has been made to illustrate the physical risks inherent in the more popular modes of illegal drug administration, namely smoking and injecting. Sniffing, included because of its prevalence elsewhere, is fairly uncommon among most user groups in Rotterdam. Of the physical risks inherent in illegal drug use, the greatest is overdose. The possibility of overdose is significantly higher when injecting than smoking, for the simple reason that when smoking from foil or the typically utilized pipes the drug is administered gradually. The physical harm potential inherent to the different administration modes is a thornier issue. All drug use puts some strain on the organs filtering toxins from the body, the liver in particular. (48 70 88) Drug smoking affects the lungs and bronchial tubes. Many forms of skin, tissue and organ damage are the result of unsterile injections. The use of unsterile injecting equipment is also at the base of the spread of several serious communicable diseases, including HIV, whereas such a direct link is absent when drugs are smoked. But, when dose and purity are standardized, equipment sterile and sharp, and technique adequate, injecting may well be the less unhealthy alternative of the two. However, given the current conditions of drug prohibition, smoking seems less threatening to the health of drug users than injecting.

"Almost all of the deleterious effects ordinarily attributed to the opiates, indeed, appear to be the effects of the narcotics laws instead." (88)

Without dismissing the importance of preventing and reducing the abuse of psychoactive substances in general, considering (illegal) drug use within the larger framework of social and public health is of main importance. In such an approach it becomes feasible to determine and weigh "primary" consequences of drug use (those related to the distinctive effects of the drug itself) and "secondary" consequences (those related to the conditions under which drugs are consumed). This distinction has been a major determinant of Dutch drug policy since the 1970s.

The importance of developing a drug policy in the context of a general health policy is becoming increasingly accepted, often spearheaded by the impact of the HIV epidemic among IDUs, (112 113 114 115) and has resulted in a rapidly growing international "harm reduction movement" among those involved in drug research, policy and practice. A major area of attention in this movement, is the development and evaluation of drug policy and practice which reduce both the primary and secondary harm of drug use. In this harm reduction framework, the aforementioned findings make an argument for stimulating policies which support the maintenance of non-injecting drug use patterns, such as chasing or sniffing and discourage injecting.

References

1. Zinberg NE: Drug, set, and setting: The basis for controlled intoxicant use. New Haven: Yale University Press, 1984.
2. Cherubin C, McCusker J, Baden M, Kavalier F, Amsel Z: The epidemiology of death in narcotic addicts. *American Journal of Epidemiology* 1972; 96: 11-22.
3. Ghodse AH, Myles JS: Asthma in Opiate Addicts. *Journal of Psychosomatic Research* 1987; 31 (1): 41-44.
4. Garriott JC, Sturmer WQ: Morphine concentrations and survival periods in acute heroin fatalities. *New England Journal of Medicine* 1973; 289: 1276-1278.
5. Levine LH, Hirsch CS, White LW: Quinine cardiotoxicity: a mechanism for sudden death in narcotic addicts. *Journal of Forensic Science* 1973; 18: 167-172.
6. Ruttenber AJ, Luke JL: Heroin related deaths: new epidemiologic insights. *Science* 1984; 226: 14-20.
7. Anderson K: Bronchospasm and intravenous street heroin. *Lancet* 1986; i: 1208.
8. Ford M, Hoffman RS, Goldfrank LR: Opioids and designer drugs. *Emergency Medicine Clinics of North America* 1990; 8(3): 495-511.
9. Steentoft A, Kaa E, Worm K: Fatal intoxications in the age group 15-43 years in Denmark in 1984 and 1985: A forensic study with special reference to drug addicts. *Zeitschrift für Rechtsmedizin* 1989; 103: 93-100.
10. Manning FJ, Ingraham LH, DeRouin EM, Vaughn MS, Kukura FC, St. Michel GR: Drug "overdoses" among U.S. soldiers in Europe, 1978-1979. II. Psychological Autopsies following deaths and near-deaths. *Int J Addict* 1983; 18(2): 153-166.
11. Kessler R, Ryser DH: Der Drogenpatient als Notfall, *Schweiz Rundsch Med Prax* 1991; 80: 31-35.
12. Cobelens FGJ, Schrader PC, Sluijs TA: Acute dood na druggebruik. Amsterdam: GG&GD Amsterdam, 1990.
13. Janssen W, Trubner K, Puschel K: Death caused by drug addiction: a review of the experiences in Hamburg and the situation in the Federal Republic of Germany in comparison with the literature. *Forensic Sci Int* 1989; 43: 223-237.
14. Brinkman N: Over dood en dosis. NCGV-reeks 80. Utrecht: Nederlands Centrum Geestelijke Volksgezondheid, 1985.
15. Feuer E, French J: Deaths related to narcotics overdose in New Jersey. *Journal of Medical Sociology* 1984; 81: 291-294.

16. Feuer E, French J: Descriptive epidemiology of mortality in New Jersey due to combinations of codeine and glutethimide. *American Journal of Epidemiology* 1984; 119: 202-207.
17. Buning EC: De GG&GD en het drugprobleem in cijfers, deel 2. Amsterdam: GG&GD Amsterdam, 1987.
18. Toet J, Ven APM van de.: Het RODIS uit de steigers: Resultaten 1988. Rotterdam.: GGD Rotterdam afdeling Epidemiologie, 1989.
19. Toet J: Het RODIS nader bekeken: Cocaïnegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
20. Strang J, Wells B: Amphetamine Abuse. Update: *The Journal of Postgraduate General Practice* 1988; 1618-1625.
21. Strang J, DesJarlais DC, Griffiths P, Gossip M: The study of transitions in the route of drug use: the route from one route to another. *British Journal of Addiction, Special Issue: AIDS, Drug Misuse and the Research Agenda* 1992; 87(3): 473-483.
22. Jones RT: The pharmacology of cocaine. In: Grabowski J (ed.): *Cocaine: pharmacology, effects, and treatment of abuse*, NIDA Research Monograph 50. Rockville MD: NIDA, 1984: 34-53.
23. Mo BP, Way EL: An assessment of inhalation as a mode of administration of heroin by addicts. *J Pharmacol Exp Ther* 1966; 154: 142.
24. Huizer H: Analytical studies on illicit heroin. V. Efficacy of volatilization during heroin smoking. *Pharm Weekblad (Scientific Edition)* 1987; 9: 203-211.
25. Grapendaal M, Leuw E, Nelen JM: De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan. Arnhem: Gouda Quint, 1991.
26. Cucco RA, Yoo OH, Cregler L, Chang JC: Nonfatal pulmonary edema after "freebase" cocaine smoking. *American Review of Respiratory Diseases* 1987; 136(1): 179-181.
27. Mittleman RE, Wetli CV: Death caused by recreational cocaine use. *JAMA* 1984; 252(14): 1889-1893.
28. Noskin GA, Kalish SB: Pott's Puffy Tumor: A complication of intranasal cocaine abuse. *Reviews of Infectious Diseases* 1991; 13: 606-608.
29. Tardiff K, Gross E, Wu J, Stajic M, Millman R: Analysis of cocaine positive fatalities. *J Forensic Sci* 1989; 34: 53-63.
30. Allred RJ, Ewer S: Fatal pulmonary edema following intravenous "freebase" cocaine use. *Annals of Emergency Medicine* 1981; 8: 441-442.
31. Wetli CV, Mittleman RE: The Body Packer Syndrome: toxicity following ingestion of illicit drugs packaged for transportation. *J Forensic Sci* 1991; 26: 492-500.
32. Duberstein JL, Kaufman DM: A clinical study of an epidemic of heroin intoxication and heroin-induced pulmonary edema. *Am J Med* 1971; 51(704).
33. Efferen L, Palat D, Meisner J: Nonfatal pulmonary edema following cocaine smoking. *New York State Journal of Medicine* 1989; 89(7): 415-416.
34. Hoffman CK, Goodman PC: Pulmonary edema in cocaine smokers. *Radiology* 1989; 172(2): 463-465.
35. Eurman DW, Potash HI, Eyler WR, Paganussi PJ, Beute GH: Chest pain and dyspnea related to "crack" cocaine smoking: value of chest radiography. *Radiology* 1989; 172(2): 459-462.
36. Larpin R, Vincent A, Perret C: Morbidite et mortalite hospitalieres de l'intoxication aigue par les opiaces. *Presse-Med* 1990; 19(30): 1403-1406.

37. Savader SJ, Omori M, Martinez CR: Pneumothorax, pneumomediastinum, and pneumopericardium: complications of cocaine smoking. *J-Fla-Med-Assoc* 1988; 75(3): 151-152.
38. Murray RJ, Albin RJ, Mergner W, Criner GJ: Diffuse alveolar hemorrhage temporally related to cocaine smoking. *Chest* 1988; 93(2): 427-429.
39. Schachne JS, Roberts BH, Thompson PD: Coronary-artery spasm and myocardial infarction associated with cocaine use. *New England Journal of Medicine* 1984; 310(25): 1665-1666.
40. Coleman DC, Ross TF, Naughton JL: Myocardial ischemia and infarction related to recreational cocaine use. *West J Med* 1982; 136: 444-446.
41. Katrein H, Kirchmair W, Konig P, Dittrich P: Rhabdomyolyse mit akutem nierenversagen nach heroin-intoxication. *Dtsch Med Wochenschr* 1983; 108(12): 464-467.
42. Aeschlimann A, Mall T, Sandoz P, Probst A: Verlauf und komplikationen der rhabdomyolyse nach heroin-intoxication. *Schweiz Med Wochenschr* 1984; 114(36): 1236-1240.
43. MacDonald KL, Rutherford GW, Friedman SM, Dietz JR, Kaye BR, McKinley GF, Tenney JH, Cohen ML: Botulism and botulism-like illness in chronic drug abusers. *Annals of Internal Medicine* 1985; 102: 616-618.
44. Pascual Calvet J, Pou A, Pedro-Botet J, Gutierrez Cebollada J: Complicaciones neurologicas no infecciosas asociadas al consumo de heroína. *Arch-Neurobiol-(Madr)* 1989; 52 (suppl 1): 155-161.
45. Moreno Millan E: Insuficiencia respiratoria por edema laríngeo: una infrecuente forma clínica de la intoxicación por heroína. *Rev Esp Anesthesiol Reanim* 1984; 31(2): 83.
46. Stamboulis E, Psimaris A, Malliara-Loulakaki S: Brachial and lumbar plexitis as a reaction to heroin. *Drug and Alcohol Dependence* 1988; 22: 205-207.
47. Duberstein JL, Kaufman DM: A clinical study of an epidemic of heroin intoxication and heroin-induced pulmonary edema. *The American Journal of Medicine* 1971; 51: 704- 714.
48. Louria DB, Hensle T, Rose J: The major medical complications of heroin addiction. *Annals of Internal Medicine* 1967; 67(1): 1-22.
49. Vickers MD, Wood-Smith FG, Stewart HC: *Drugs in anaesthetic practice*, 5th edition. London: Butterworths, 1978.
50. Mullins S: Personal communication, 1991.
51. Oliver RM: Bronchospasm and heroin inhalation. *Lancet* 1986; 1(8486): 915.
52. Anderson K: Bronchospasm and intravenous street heroin. *Lancet* 1986; i: 1208.
53. del los Santos-Sastre S, Capote-Gil F, Gonzalez-Castro A: Airway obstruction and heroin inhalation. *Lancet* 1986; 2(8516): 1158.
54. Hughes S, Calverley PM: Heroin inhalation and asthma. *British Medical Journal* 1988; 297: 1511-1512.
55. Wolters EC, Wijngaarden GK van, Stam FC, Rengelink H, Lousberg RJ, Schipper MEI, Verbeeten B: Heroïne-leuko-encefalopathie: spongiforme leuko-myelo-encefalopathie na inhalatie van verontreinigde heroïne. *Ned T Geneesk* 1982; 126(12): 508-514.
56. Wolters EC, Stam FC, Lousberg RJ, Wijngaarden GK van, Rengelink H, Schipper MEI: Leukoencephalopathy after inhaling "heroin" pyrolysate. *Lancet* 1982; ii: 1233.
57. Tashkin DP, Simmons MS, Caulson AH, Clark VA, Gong H Jr: Respiratory effects of cocaine freebasing" among habitual users of marihuana with or without tobacco. *Chest* 1987; 92(4): 638-644.

58. Salzman GA, Khan F, Emory C: Pneumomediastinum after cocaine smoking. *South Med J* 1987; 80(11): 1427-1429.
59. Gordon K: Freebased cocaine smoking and reactive airway disease. *Journal of Emergency Medicine* 1989; 7(2): 145-147.
60. Strang J, Gurling H: Computerized tomography and neuropsychological assessment in long-term high-dose heroin addicts. *British Journal of Addictions* 1989; 84 (9): 1011-1019.
61. Owens H: (book review) What works? Safer injecting guide. *The International Journal of Drug Policy* 1990; 2(2): 31-32.
62. Australian I.V. League: Handy Hints. New South Wales: Social Change Media, 1990.
63. Stern LS: Self-injection education for street-level sexworkers. In: O'Hare PA, Newcombe R, Matthews A, Buning EC, Drucker E (eds.): *The Reduction of Drug-Related Harm*. London & New York: Routledge, 1992: 122-127.
64. Horn EH, Henderson HR, Forrest JA: Admission of drug addicts to a general hospital: a retrospective study in the northern district of Glasgow. *Scottish Medical Journal* 1987; 32(2): 41-45 .
65. Javaid JI, Musa MN, Fischman M, Schuster CR, Davis JM: Kinetics of cocaine in humans after intravenous and intranasal administration. *Biopharmaceutics and Drug Disposition* 1983; 4: 9-18.
66. Sternbach G, Morgan J, Eliastam M: Heroin addiction: acute presentation of medical complications. *Annals of Emergency Medicine* 1980; 9(3): 161-169.
67. Berkow R, Fletcher AJ (eds.): *The Merck manual of diagnosis and therapy*, fifteenth edition. New Jersey: Merck Sharp & Dohme Research Laboratories, 1987: 1484.
68. Werner D: *Where there is no doctor: a village health care handbook*. Palo Alto, California: Hesperian Foundation, 1977.
69. Herb F, Watters JK, Case P, Petitti D: Endocarditis, subcutaneous abscesses and other bacterial infections in intravenous drug users and their association with skin-cleaning at drug injection sites. presented at the V International Conference on AIDS, Montreal, Canada, 1989: [Abstract no.Th.D.O.4].
70. Selwyn PA, O'Connor PG: Diagnosis and treatment of substance users with HIV infection. *Primary Care* 1992; 19(1): 119-156.
71. Koester S, Booth R, Wiebel W: The Risk of HIV transmission from sharing water, drug mixing containers and cotton filters among intravenous drug users. *International Journal of Drug Policy* 1990; 1(6): 28-30.
72. Brettle R, Farrell M, Strang J: Clinical features of HIV infection and AIDS in drug takers. In: Strang J, Stimson G (eds.): *AIDS and drug misuse; the challenge for policy and practice in the 1990s*. London and New York: Routledge, 1990: 38-53.72.22
73. Guidotti M, Passerini D, Brambilla M, Landi G: Heroin myelopathy: a case report. *Ital J Neurol Sci* 1985; 6: 99-100.
74. Fricchione LF, Sepkowitz DV, Gradon JD, Berkowitz LB: Pericarditis due to bacillus cereus in an intravenous drug user. *Review of Infectious Diseases* 1991; 13: 774.
75. Richter RW, Pearson J, Brunn B: Neurological complications of addiction to heroin. *Bulletin of the NY Academy of Medicine* 1973; 49: 3-21.
76. Lupovich P, Pilewski R, Sapira JD, Juselius R: Cardiotoxicity of quinine as adulterant in drugs. *JAMA* 1970; 212: 1216.
77. Brust JCM, Richter RW: Quinine amblyopia related to heroin addiction. *Annals of Internal Medicine* 1974; 74: 84-86.
78. Hecker E, Friedli WG: Plexuslasionen, rhabdomyolysis and heroin. *Schweiz-Med-Wochenschr* 1988; 118(32): 1982-1988.

79. Mulleady G: A review of drug abuse and HIV infection. *Psychology and Health* 1987; 1: 149-163.
80. Burrows D; A long way to go! The urgent need for valid research. *Junkmail* 1992; 3(1&2): 14-15.
81. Murphy S, Waldorf D: Kickin' down to the street doc: shooting galleries in the San Francisco Bay area. *Contemporary Drug Problems* 1991; 18: 9-29.
82. Krause GS: Brown-Sequard syndrome following heroin injection. *Ann Emerg Med* 1983; 12(9): 581-583.
83. Hillstrom RP, Cohn AM, McCarroll KA: Vocal cord paralysis resulting from neck injections in the intravenous drug use population. *Laryngoscope* 1990; 100: 503-506.
84. Raz S, Ramanathan V: Injection injuries of the recurrent laryngeal nerve. *Laryngoscope* 1984; 94: 197-200.
85. Hawkins KA, Bruckstein AH, Guthrie TC: Percutaneous heroin injection causing Horner's syndrome, *JAMA* 1977; 237: 1963-1964.
86. Krueger LE, Wood RW, Diehr PH, Maxwell CL: Poverty and HIV seropositivity: the poor are more likely to be infected. *AIDS* 1990; 4(8): 811-814.
87. Berkman LF, Syme SL: Social networks, host resistance and mortality: a nine year follow- up study of Alameda County residents. *American Journal of Epidemiology* 1979; 109: 186-xx.
88. Brecher EM: *Licit and Illicit Drugs*. Boston, Toronto: Little Brown and Company, 1972.
89. Schulman LC, Mantell JE, Eaton C, Sorrell S: HIV-related disorders, needle users and the social services. In: Leukefeld CG, Battjes RJ, Amsel Z, (eds.): *AIDS and intravenous drug use: future directions for community-based prevention research*, NIDA Research Monograph 93. Rockville MD: NIDA, 1990: 254-276.
90. Cohen P. *Drugs as a Social Construct*, Academisch Proefschrift, Universiteit van Amsterdam, 1990.
91. Casriel C, DesJarlais DC, Rodriguez R, Friedman SR, Stepherson B, Khuri E: Working With heroin sniffers: clinical issues in preventing drug injection. *Journal of Substance Abuse Treatment* 1990; 7: 1-10.
92. Treaster JB: Cocaine users adding heroin and a plague to their menus. *The New York Times* July 21, 1990: 1, 26.
93. Fischman MW: The behavioral pharmacology of cocaine in humans. In: Grabowski J (ed.): *Cocaine: pharmacology, effects, and treatment of abuse*, NIDA Research Monograph 50. Rockville MD: NIDA, 1994: 72-91.
94. Vilensky W: Illicit and licit drugs causing perforation of the nasal septum: case report. *Journal Forensic Science* 1982; 27: 958-962.
95. Goldberg RA, Weisman JS, McFarland JE, Krauss HR, Hepler RS, Shorr N: Orbital inflammation and optic neuropathies associated with chronic sinusitis of intranasal cocaine abuse: possible role of contiguous inflammation. *Archives of Ophthalmology* 1989; 107: 831-835.
96. Newman NM, DiLoreto DA, Ho JT, Klien JC, Birnbaum NS: Bilateral optic neuropathy and osteolytic sinusitis: complications of cocaine abuse. *JAMA* 1988; 259: 72-74.
97. Kudrow DB, Henry DA, Haake DA, Marshall G, Mathisen GE: Botulism associated with clostridium botulism sinusitis after intranasal cocaine abuse. *Annals of Internal Medicine* 1988; 109: 984-985.
98. Schweitzer VG: Osteolytic sinusitis and pneumomediastinum: deceptive otolaryngologic complications of cocaine abuse. *Laryngoscope* 1986; 96: 206-210.

99. Gawin FH, Kelber HD: Abstinence symptomatology and psychiatric diagnosis among cocaine abusers. *Archives of General Psychiatry* 1986; 43: 107-113.
100. Sterk C: Cocaine and HIV seropositivity. *Lancet* 1988; 1: 1052.
101. Schoenbaum EE, Hartel D, Friedland GH: Crack use predicts incident HIV seroconversion. presented at the VI International Conference on AIDS, San Francisco, USA, 1990. [Abstract no.Th.C.103]
102. Golden E, Fullilove M, Fullilove R, Lennon R, Porterfield D, Schwartz S, Bolan G: The effects of gender and crack use on high risk behaviors. presented at the VI International Conference on AIDS, San Francisco, USA, 1990. [Abstract no.F.C.742]
103. Chiasson MA, Stoneburger RL, Hildebrandt DS, Telzak EE, Jaffe HW: Heterosexual transmission of HIV associated with the use of smokable freebase cocaine (crack). presented at the VI International Conference on AIDS, San Francisco, USA, 1990. [Abstract no.Th.C.588]
104. Wiebel W, Ouellet L, Guydan C, Samairat N: Cocaine injection as a predictor of HIV risk behavior. presented at the VI International Conference on AIDS, San Francisco, USA, 1990 [Abstract no.FC 767]
105. Hartgers C, Hoek JAR van den, Krijnen P, Brussel GHA, Coutinho RA: Changes over time in heroin and cocaine use among injecting drug users in Amsterdam, The Netherlands, 1985-1989. *British Journal of Addiction* 1991; 86: 1091-1097.
106. Ghodse H: Mortality and morbidity. In: Edwards G, Busch C (eds.): *Drug problems in Britain: a review of ten years*. London: Academic Press, 1981: 171-215.
107. Ghodse AH, Sheehan M, Taylor C, Edwards G: Deaths of drug addicts in the United Kingdom 1967-81. *British Medical Journal* 1985; 290: 425-428.
108. Bardsley J, Turvey J, Blatherwick J: Vancouver's needle exchange program. *Canadian Journal of Public Health* 1990; 81: 39-45.
109. New York City Department of Health: The pilot needle exchange study in New York City: a bridge to treatment; A report on the first ten months of operation. New York City: Department of Health 1989.
110. The U.S. Senate, 15th Legislature, A bill for an act relating to infection and communicable diseases. State of Hawaii 1990; S.B.No.2413 S.D.2.
111. Carlson RG, Siegal HA: The crack life: an ethnographic overview of crack use and sexual behavior among African-Americans in a midwest metropolitan city. *Journal of Psychoactive Drugs*. 1991; 23(1): 11-20.
112. Stimson GV: AIDS and HIV: The challenge for British drug services. *British Journal of Addiction* 1990; 85: 329-339.
113. Black D: AIDS and HIV. The way forward?: Comment on Stimson's 'AIDS and HIV'. *British Journal of Addiction* 1990; 85: 350-351.
114. Strang J, Stimson GV (eds.): *AIDS and drug misuse: The challenge for policy and practice in the 1990s*. London, New York: Routledge, 1990.
115. Stimson GV, Strang J (eds.): *British Journal of Addiction, Special Issue: AIDS, Drug Misuse and the Research Agenda* 1992; 87(1).

DRUG SHARING AND HIV TRANSMISSION RISKS: FRONTLOADING AND BACKLOADING AMONG INJECTING DRUG USERS

Contents

Introduction

Sharing Drugs

Frontloading and Backloading

Social Implications of Drug Sharing

Virological and Epidemiological Implications of Drug Sharing

Conclusion

References

INTRODUCTION

Drug users are at risk for the human immunodeficiency virus (HIV) and other viral and microbiological infections. Although recently non injecting drug use related HIV has been reported (1 2 3 4), particularly injecting drug users (IDUs) are at risk, because of the use of contaminated injection equipment, generally termed needle sharing. (5 6) (Throughout the text, unless otherwise specified, the term needle sharing refers to the sharing of both needles and syringes.) On the basis of extensive research, needle sharing seems to be the most significant AIDS-related risk behavior practiced by IDUs. (5 6 7 8) Moreover, in the chain of transmission, the IDU seems also to be the main vector for secondary HIV spread to the heterosexual population in the U.S. (9 10)

In contrast with the United States and many neighboring countries, only a minority of drug users inject in the Netherlands. Most Dutch heroin users smoke their heroin and cocaine from tinfoil (chinesing or chasing the dragon). The availability, purity, and price of these drugs on the Dutch illegal market have stabilized over the years at relatively high levels and moderate prices, compared with neighboring countries and the United States. These economic factors were prerequisites for the diffusion (11) of the Asian practice of heroin smoking into the Dutch heroin using population. Mainly because of these economic factors, many Dutch users do not feel the necessity to inject, as do most of their foreign counterparts. (12 13 14) However, the IDU minority

have not been overlooked. Since the mid 1970s harm reduction strategies for all drug users were adopted by Dutch governmental (15) and helping organizations. (16) Around 1985 AIDS became a major item of concern in the Netherlands. In 1984 Amsterdam started its needle exchange system. The number of needles that were distributed grew rapidly from 25.000 in 1984 to 820.000 in 1989. (17) Rotterdam started its municipal needle exchange system in the first half of 1987. The total number of needles distributed is considerably lower than in Amsterdam, respectively 196700 in 1988, 251700 in 1989, 223200 in 1990 and 231300 in 1991. (18)

Few HIV seroprevalence studies have been conducted in the Netherlands. In a selected group that may not represent all drug users in Amsterdam, van den Hoek et al. found a seroprevalence of 33 percent at entry into the study. (19) A study outside the large urban centers indicates a seropositivity of 4.8 percent in a non-representative sample. (20) In a Rotterdam study of a sample of extreme problematic drug users in methadone maintenance seropositivity was found to be 9.7 percent in 1986 and 6.5 percent in 1987. (16) Unpublished results from a 1988 study of an intake cohort of a drug treatment introduction program in the Hague show a seroprevalence of 0%. (21) As a comparison, self-reported lifetime prevalence of hepatitis among methadone clients in Rotterdam is 21 percent, for gonorrhea 24 percent and for syphilis 7 percent. (22)

HIV is undoubtedly transmitted through needle practices. Nonetheless, especially in situations where clean syringes are readily available it is not merely the act of sharing needles that constitutes the risks of spreading the virus. The behaviors associated with needle sharing can be decomposed into different components that each have their own distinctive probability of risk. The hypothesis of this chapter is that a deeper look into drug use contexts reveals other forms of sharing behavior that may be important factors in the transmission of HIV. A look beyond needle sharing involves a look into a world of multiple sharing and care taking practices that constitute the bonds of relationships of IDUs' social networks. These relationships are multidimensional and may lead to relationships with non-IDUs. For analytic purposes three patterns of sharing behavior directly related to HIV-transmission risks can be distinguished: 1) sharing, (including lending and passing on) syringes or needles; 2) sharing of other drug injection paraphernalia; 3) drug sharing. Specifically, certain

forms of drug sharing may provide additional routes by which contaminated needles can present risks of infection to IDUs. In this chapter, a look beyond needle sharing is presented and one such drug sharing practice - frontloading - is described.

Sharing Drugs

Chapter nine demonstrated that the use of heroin and cocaine among the research participants is embedded in a social structure that facilitates the use of these drugs. In addition, this social structure also functions as a social support system for the users. It was shown that valuable items, such as housing, food and clothing are shared on a regular basis in friendship and acquaintance networks. Users were observed to frequently help each other with daily problems associated with a lifestyle in which the use of drugs is the most important (and thus overwhelmingly demanding) value. Furthermore, in this social structure they socialize and find moral support.

In this context of social support in drug user networks the sharing of drugs is an important and frequent phenomenon. Quantitative analysis of the observations of drug self-administration rituals clearly shows that drug use rarely is an individual act. The most common places where drugs were ingested are the dealing place (56%), home (18%), and a friends home (14%) (see figure 9.1 in chapter nine). Likewise, 43 of 62 observed drug sales at house addresses were followed by direct ingestion of (at least a part of) the purchased drugs. The mean number of people present at these places during the observed drug taking event was 4.3. As the vast majority of drugs is consumed at other places than home and with other people around, it was not surprising that drugs were shared in 50% (N = 93) of observed events (see figure 11.1). Chapter nine discussed the instrumental and social (i.e. social) functions of drug sharing, that are largely equal for smoking and injecting drug users. The proceeding sections will focus on the techniques commonly used when IDUs share drugs.

Frontloading and Backloading

In 81% of observed sharing events among IDUs (N = 26), the drugs were shared by frontloading or *streepjes delen* (sharing stripes; referring to the scale gradients on the barrel of the syringe). This practice involves a special technique using two syringes (see figure 11.2). When sharing by frontloading, the drug is prepared on one spoon and then drawn in one syringe (A). From the second syringe (B) the needle is removed and the plunger is drawn back and by spouting a part of the solution from syringe A through the hub of syringe B, the drugs are divided. In this way the drugs can be divided into two or more equal parts (see photo sequence).

The following fieldnote documents a representative situation in which drugs are shared by frontloading. Richard and Chris have bought drugs at a dealing place and have gone home to inject:

Back home Richard and Chris start preparations to shoot up a 'cocktail' (a mixture of cocaine and heroin, also called a speedball). Chris and Richard both get tools and put them on the table. They sit down at the same time. Richard puts the spoon in front of him and takes out the packages. He opens the heroin package, holds it above the spoon and empties it. He adds some lemon and water. Meanwhile Chris opens two injection swabs and puts them on the broad rim (edge) of the ash-tray. When Richard is ready putting things into the spoon he nods, which Chris understands as a sign to put the swabs on fire with his lighter. This produces a flame +4 cm high, above which Richard now holds the spoon to boil the contents. Chris looks interestingly into the spoon and says: "I hope it's enough that we feel it." It takes something more than 2 minutes to dissolve the heroin. After this Richard puts in the cocaine almost immediately, without waiting for the solution to cool off. Cotton is used to make a filter, and Richard draws the cocktail in the syringe without the needle. Richard also divides the cocktail. He puts the needle back on his syringe. Chris gives him his syringe after removing the needle. Richard inserts his needle in Chris' syringe and pushes the piston. Before doing so he looks how much cocktail is in his syringe, so he knows how much to put over. He then holds the 2 syringes side by

side to compare the contents. In one of them is a little more. That one he gives to Chris.

Except when the spoon is well cleaned and both the syringes are new or effectively cleaned (e.g. by bleaching) there is an increased risk of passing microbiological or viral infections, when utilizing this technique. The most obvious direction of transmission is from A to B as in syringe A present blood rests are diluted in the drug solution. However when inserting A into B, the needle of A can get into contact with virus particles (e.g. in old blood) in the hub of syringe B. This practice is only one of the many possible ways to utilize syringes in sharing drugs. Spouting from the donor syringe into the recipient syringe was most often observed, but it is, of course, also possible to draw the liquid from the donor syringe. This can be termed reversed frontloading. In order to frontload, the needle of at least one of the syringes involved in the drug sharing event must be removable (so that a needle can be inserted). Where syringes with fixed needles (mostly 1 ml insulin) are the standard a similar technique has evolved, called backloading. This procedure was demonstrated by a female IDU from London:

The drug solution is one of the insulin syringes. She pulls the plunger out of the other syringe and holds the barrel almost horizontal. Slowly she spouts half of the solution in the back opening. "You need to do it very precisely. It must not go in all the way. There needs to stay some air between the liquid and the needle, otherwise you fuck up." Just as she explains, the liquid accumulates ± 1 cm from the back of the needle. She puts down the donor syringe, picks up the plunger and carefully holds it against the opening. In one smooth movement she pushes the plunger a little into the barrel, while simultaneously turning the needle upwards. "This is the crucial move", she explains, "I've seen several people blow shots doing it --squirting the shot into the air. Mostly when they were sick --shaking hands, you know."

From this demonstration it can be assessed that backloading requires a considerably more skilled hand than frontloading. Sometimes a certain quantity of drug solution is

prepared in advance and stored in a syringe. This solution is then consumed in several shots over a given period of time --either alone or shared with other users.

Social Implications of Drug Sharing

Drugs are shared for an intertwined complex of social and economic reasons. In the observed sharing events 68% involved social incentives and in 83% economic. Many events fit into both economic and social categories. As illustrated in the last fieldnote, heroin users frequently share the drugs they buy together. At house addresses one pays less if purchasing in quantity. Therefore, it is rational to pool money and jointly buy drugs. Thus sharing results in more drugs for the individual for the same amount of money. Likewise, dealer/users may give a *betermakertje* or *mazzeltje* to someone without money for the sake of customers relations. But this kind of credit is not evenly distributed to all customers. Nor is it over time. Dealers must take several factors into account. They must control their financial balance and anticipate their clients' financial position, but they must also remain on good terms with their friends. They do not want to acquire the image of being in it just for the money and become alienated from their personal network. Helping with a *betermakertje* is a customary motivation for drug sharing, not limited to dealers. The term helping is common vocabulary and refers to the revered communal rule of helping a fellow user who is in withdrawal (see chapter nine).

A frequent sharing situation highly resembles that of being among friends in a pub. The users sit around a table, talk in a sociable atmosphere and share the available drugs. Mostly this concerns smokers, as IDUs spend less time at house addresses. Participation in shared drug taking activities (e.g. buying and using at the same house addresses) results over time in more structural relationships among individuals. By sharing drugs users make new contacts and existing ones are reinforced. Indeed, drug use is not the only factor that brings and keeps drug users together. They engage in many common activities and they spend considerable time on social and other conventional activities. (23 24) Moreover, the relations of the observed drug users were often much more intense and multiplex. Drugs were often shared among sexual partners, family, or people sharing living arrangements. A significant percentage (23%) of the IDUs observed to share drugs were typical running mates or dyads. The acquisition and use of drugs is an essential binding

element in these dyadic relationships. (25 26) The following fieldnote provides an illustration.

Meanwhile they are telling how they came together, live together, etc. They're together for +5 weeks now. Chris: "We share everything; social benefit, food, dope, etc." Richard: "For instant tomorrow Chris gets his benefit and I get dope for it. Friday I'll get my money and we use that to buy dope." He goes on: "We go together into town every day, first to get methadone and then to make money."

The bond between running partners is believed to be "the strongest positive relationship within the IV-drug use subculture" and a "substitute for family". (27) Drug sharing as described in this chapter is based on a study of a Dutch population; that is, in a situation of relatively low criminalization of drug use and relatively high availability of both drugs and syringes. However, drug sharing is embedded in a much broader pattern of social behaviors of heroin users, which includes the sharing of many necessities of life. Although the frequency of these sharing behaviors could be influenced by the Dutch normalization policy, (28 29) enabling drug users to reflect the social responsibility, characteristic for Dutch society, (30) in essence they are almost universal in drug subcultures and have been documented in many studies in different times and places. (25 31 32) Sharing fits the broader context of drug user's lives and finds its function in coping with craving, human contact and needs, and life on the margins of society. As Mata and Jorquez put it:

Efforts to curb injecting drug use and needle sharing must begin with the understanding that these practices are embedded and maintained by a set of ongoing personal relations and exchanges in injecting drug users' personal social networks. Needle sharing must be seen as part of the larger picture of drug sharing practices. Drug sharing is at once a means to socialize, to belong, and to provide some measure of protection from the exigencies of *la vida loca*. More immediately, it is a means to cope with one's craving for drugs (31).

Both the helping and sharing (as well as the ripping and violence) characteristic of the subcultures of heavy drug users, are normal behaviors under abnormal or extreme circumstances. They can be compared with similar behaviors in high stress situations, such as in war and concentration camps. (33 34) Without a little help from your friends it is impossible to survive in the tough parallel world of users, dealers and police. In this context, sharing balances the constraints, the ripping and running (35), the competition, violence and mistrust of daily life. Then, drug sharing is an integrating ritual sanctioning a common lifestyle and strengthening mutual ties. (36)

Virological and Epidemiological Implications of Drug Sharing

The presented data suggest that the drug sharing technique of frontloading can be an alternative route of viral transmission. An important issue, regarding HIV transmission is the survival of HIV in blood rests in a syringe. It has been demonstrated that the virus can be detected up to 30 days (37) and even in syringes without visible remnants of blood. (38) The presumed infectivity of Western Blot-positive blood (39) supports the notion that positive tested syringes are potentially infectious when used by other IDUs. Moreover, the interval of 30 days must be regarded as an extremely long period between use and re-use of syringes of IDUs. It is much more plausible that a syringe is used several times a day, especially when cocaine is involved, or when employed at shooting galleries. In this research it was found that when IDUs shared drugs by frontloading, the interval between two shared doses was sometimes even less than half an hour. Furthermore, the upsurge of injecting cocaine use may have additional consequences. Recent findings indicate that cocaine can exacerbate HIV-1 transmission and infection in drug users. (40) First publication of the findings on frontloading, prompted two American studies into the frequency of frontloading and its association with HIV infection. Among a sample of IDUs in Baltimore, Samuels et al. found no significant association. (41) However, the most recent findings come from New York and support the hypothesized infectivity of frontloading. Frontloading was widespread in this study. During the two years before the interview almost 40% (80/207) of subjects frontloaded, as did 30% (63/210) during the past 30 days. A strong association with HIV infection was reported. HIV seroprevalence was 71% among IDUs who frontloaded during the last two years and 36% among those who did not. (42)

The technique of frontloading and similar techniques are known far beyond the research sites of this study. This hypothesis is supported by the data and other research. Sharing drugs is a common phenomenon. An evaluation of a needle exchange program in a small Dutch town showed that 67% of the exchangers were preparing collective doses. (43) The observations of frontloading in this research were recorded in different friendship groups and networks. In addition, a considerable number of the IDUs in this study have at times kept residence in other Dutch or foreign cities. Some have their roots in other cities, others come from neighboring countries. Another obvious ground for sharing drugs by frontloading is that it is the most efficient and honest way to split a certain amount of drugs in two or more portions. When dividing the powdered drugs it is very difficult to cut them into equal amounts without a scale of some sort. By frontloading the solution can rather simply be proportionated because most syringes have scale gradients on them. This is a powerful incentive when dealing with goods that on a street level outweigh the price of gold 4 to 20 times. Furthermore, experienced IDUs are highly familiar with the instrument that is indispensable for their preferred route of getting high. In that respect, they are certainly the experts. When questioned on frontloading, a London female IDU colorfully explained while demonstrating backloading with two 1 ml insulin syringes:

"Yeah, I know what you mean. But because most users use these 'fits' (she points at the insulin syringes, which have fixed needles), we do it like this. [demonstrates backloading] ... Hey, we live with this thing --go to bed with it and get up with it. We know it inside out. Played with it, did everything what you can think of. Makes splitting gear (heroin) easy and fast, get it? Everybody knows that."

Indeed, around the world IDUs know what is and is not possible with syringes and needles and what serves their needs best. For the purpose of a fair share, frontloading and backloading apparently qualify everywhere. In Warsaw, Poland -- where syringes are extremely scarce-- frontloading was observed at a dealer's house. This dealer had two sets. One he used himself. The other syringe had a double function. The dealer sold self-produced compote. In transactions the second syringe was used to measure and transfer the requested quantity in the client's

syringe. It was, however, also lent to clients, who did not possess their own set. (44) Frontloading has been observed in drug sharing events in the Bronx (New York City) and Los Angeles (45), and reported in Baltimore. (41) In South Florida it is used in a procedure to prepare speedball, (46) It seems also common practice in Barcelona, Spain (47) and in several Swiss cities, such as Basel, Bern and Zürich. (48) Backloading has been documented in New York, (42) San Francisco (49) and Denver (50) in the USA, in London, Great Britain (51) and in Barcelona, Spain. (47)

CONCLUSION

The AIDS epidemic among IDUs highlights the importance of basic knowledge of lifestyles, behaviors and interactions of drug users in their social networks. The thesis of this chapter has been that a deeper look into this natural territory may reveal unknown and, for HIV prevention important matters. One such matter, the practice of frontloading has been presented. Research results on its infectivity are starting to become available. The negative results from Baltimore may well be related to methodological problems, as the New York study shows a very strong association. In addition to needle sharing, frontloading can be an important factor in the spread of HIV among IDUs. Until recently, this has been overlooked by most researchers as well as by IDUs who may otherwise avoid needle sharing and/or other risk practices. In the Netherlands, where there actually is a high availability of sterile syringes and where the actual sharing of needles and syringes has decreased significantly, (52 53) frontloading could even become a main route of HIV-spread. Thus, needle sharing is a definitionally incomplete notion. The term is a rough simplification of a very complex reality. Interactions of patterns, situations and socio-cultural factors involved in illegal drug use contribute considerably to the spread of HIV. Further research efforts into drug sharing practices and related issues should enhance scientific appreciation of these socio-cultural factors. On the other hand, prevention efforts aimed at filling such gaps in drug users' knowledge of HIV-risks need to be given urgent attention. In the Netherlands, the described findings have been implemented in printed prevention materials for IDUs, that are distributed by drug treatment agencies. (54) As only a minority of drug users at any given time are in daily contact with treatment and helping agencies, the methods used to disseminate this knowledge should involve a

permanent street education process of active IDUs and equipping them with the necessary tools to change their behavior in the desired direction.

References

1. Sterk C: Cocaine and HIV seropositivity. *Lancet* 1988, 1:1052.
2. Schoenbaum EE, Hartel D, Friedland GH: Crack use predicts incident HIV seroconversion. presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. Th.C.103]
3. Golden E, Fullilove M, Fullilove R, Lennon R, Porterfield D, Schwartz S, Bolan G: The effects of gender and crack use on high risk behaviors. presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. F.C.742]
4. Chiasson MA, Stoneburger RL, Hildebrandt DS, Telzak EE, Jaffe HW: Heterosexual transmission of HIV associated with the use of smokable freebase cocaine (crack). presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. Th.C.588]
5. Brettle RP: Epidemic of AIDS related virus infection among intravenous drug abusers. *BMJ* 1986; 292: 1671.
6. Chaisson RE, Moss AR, Onishi R, Osmond D, Carlson JR: Human immunodeficiency virus infection in heterosexual intravenous drug users in San Francisco. *Am J Public Health* 1987; 77: 169-172.
7. Marmor M, Des Jarlais DC, Cohen H, et al.: Risk factors for infection with human immunodeficiency virus among intravenous drug abusers in New York city. *AIDS* 1987; 1: 39-44.
8. Hoek JAR van den, Coutinho RA, Haastrecht HJA van, Zadelhoff AW van, Goudsmit J: Prevalence and risk factors of HIV infections among drug users and drug using prostitutes in Amsterdam. *AIDS* 1988; 2: 55-60.
9. Newmeyer JA: The role of the IV drug user and the secondary spread of AIDS. *Street pharmacologist* 1987; 11(11): 1-2.
10. Moss AR: AIDS and intravenous drug use: the real heterosexual epidemic. *BMJ* 1987; 294: 389-390.
11. Katz E, Levin ML & Hamilton H: Traditions of research on the diffusion of innovations. *Am Sociol Rev* 1963; 28: 237-252.
12. Casriel C, Rockwell R, Stepherson B: Heroin sniffers: between two worlds. *J Psychoactive Drugs* 1988; 20(4): 37-40.
13. Burt J, Stimson GV: Report of in-depth survey of intravenous drug use in Brighton. London: Monitoring Research Group, 1988.
14. Power RM: The influence of AIDS upon patterns of intravenous Use- Syringe and Needle Sharing- among illicit drug users in Britain. In: Battjes RJ, Pickins RW (eds.): Needle sharing among intravenous drug abusers: National and international perspectives. Rockville: NIDA, 1988: 75-88.
15. Engelsman EL: Dutch policy on the management of drug related problems. *Br J Addict* 1989; 84: 211-18.
16. Barends W: Routinematig HIV-onderzoek in een Rotterdams methadonprogramma. *Medisch Contact* 1988; 43(2): 58-60.
17. Buning EC: DE GG&GD en het drugprobleem in cijfers, deel IV. Amsterdam: GG&GD, 1990.

18. Geurs R: Spuitomruil in Rotterdam. Een evaluerende notitie over de spuitomruil in het kader van de AIDS-preventie onder Rotterdamse drugverslaafden. Rotterdam: GGD Rotterdam e.o., 1992.
19. Hoek JAR van den, Haastrecht HJA, Coutinho RA: Risk reduction among intravenous drug users in Amsterdam under the influence of AIDS. *Am J Public Health* 1989; 79: 1355- 1357.
20. Limbeek J van, Wouters L, Hekker AC, Cramer A: Een pilot-studie naar het voorkomen van personen met HIV-antistoffen in hulpverleningsprogramma's voor drugsverslaafden buiten de Randstad. Bilthoven: FZA, 1987.
21. Haan HA de, Hoek JAR van den, Haastrecht HJA van, Meer CW van der, Coutinho RA: Relatief lage HIV-prevalentie onder druggebruikers in Den Haag ondanks riskant spuitgedrag. *Nederlands Tijdschrift voor Geneeskunde* 1991; 135: 218-221.
22. Toet J: Het RODIS nader bekeken: Cocaïnegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
23. Kaplan CD, Vries M de, Grund J-PC, Adriaans NFP: Protective Factors: Dutch intervention, health determinants and the reorganization of addict life. In: Ghodse H, Kaplan CD, Mann RD. (eds.): *Drug misuse and dependence*. London: Parthenon, 1990: 165-176.
24. Faupel CE: Drug availability, life structure and situational ethics of heroin addicts. *Urban Life* 1987; 15(3,4): 395-419.
25. Feldman HW, Biernacki P: The ethnography of needle sharing among intravenous drug users and implications for public policies and intervention strategies. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 28-39.
26. Preble E, Casey JJ: Taking care of business - the heroin user's life on the street. *Int J Addict* 1969; 1: 1-24.
27. Des Jarlais DC, Friedman SR, Strug D: AIDS and needle sharing within the IV-drug use subculture. In: Feldman DA, Johnson TM (eds.): *The social dimensions of AIDS*. New York: Praeger Publishers, 1986: 111-125.
28. Engelsman EL: Drug misuse and the Dutch: A matter of social wellbeing and not primarily a problem for the police and the courts. *BMJ* 1991; 302: 484-485.
29. Bilsen H van: Moralisieren of normaliseren. *Tijdschrift voor Alcohol, Drugs en andere Psychotrope Stoffen* 1986; 12(5): 182-189.
30. Hartsock P: Trip report Europe. Rockville: NIDA, 1987.
31. Mata AG, Jorquez JS: Mexican-American intravenous drug users' needle-sharing practices: Implications for AIDS prevention In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 40-58.
32. Des Jarlais DC, Friedman SR, Sothoran JL, Stoneburger R: The sharing of drug injection equipment and the AIDS epidemic in New York City: The first decade. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 160-75.
33. Epen JH van: Drugverslaving en alcoholisme: Diagnostiek en behandeling. Amsterdam: Elsevier, 1983.
34. Despres T: *The survivor: An anatomy of life in the death camps*. New York: Pocket books, 1976.
35. Agar M.: *Ripping and running*. New York: Seminar Press, 1973.
36. Durkheim E: *The elementary forms of the religious life*. London: George Allen & Unwin LTD, 1971.

37. Wolk J, Wodak A, Morlet A, et al.: Syringe HIV seroprevalence and behavioral and demographic characteristics of intravenous drug users in Sidney, Australia, 1997. *AIDS* 1988; 2: 373-377.
38. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. *Am J Public Health* 1990; 80: 150-152.
39. Esteban JI, Shih JWK, Tai C-C et al.: Importance of Western blot analysis in predicting infectivity of anti-HTLV-III/LAV positive blood. *Lancet* 1985; 2: 1083-1086.
40. Lai, P.K., Takayama, H., Tamura, Y., Nonoyama, M. (1990) Activation of human immunodeficiency virus in human myeloid cells by cocaine. presented at the VI International Conference on AIDS, San Francisco, USA. [abstract no. S.A.226]
41. Samuels JF, Vlahov JC, Solomon L, Celentano DD: The practice of 'frontloading' among intravenous drug users: association with HIV-antibody. *AIDS* 1991; 5(3): 343.
42. Jose B, Friedman SR, Neaigus A, Curtis R, Des Jarlais DC: 'Frontloading' is associated with HIV infection among drug injectors in New York City. Presented at the VIII International Conference on AIDS, Amsterdam, The Netherlands, 19-24 July 1992. [Abstract Th.C.1551]
43. Huson D, Neeteson K: Enquete AIDS-preventie HKPD Vlissingen. Vlissingen: HKPD, 1989.
44. Valk P van der, Jong W de: Verslaafd in Polen. *Intermediair* 1988, 24(17): 59-63.
45. Stern LS: Personal communication, 1990.
46. Chitwood DD, McCoy CB, Comerford M: Risk behavior of intravenous cocaine users: Implications for intervention. In: Leukefeld CG, Battjes RJ, Amsel Z (eds.): *AIDS and intravenous drug use: Future directions for community based prevention research*. NIDA research monograph 93. Rockville MD: National Institute on Drug Abuse, 1990: 120- 133.
47. Bolderhey A: Personal communication 1990.
48. Weisswange A: Personal communication, 1990.
49. Froner G: Digging for diamonds: A lexicon of street slang for drugs and sex. San Francisco: Health outreach team productions, 1989.
50. Koester S, Booth R, Wiebel W: The risk of HIV transmission from sharing water, drug- mixing containers and cotton filters among intravenous drug users. *International Journal on Drug Policy* 1990; 1(6): 28-30.
51. Efthimiou A: Personal communication, 1990.
52. Kaplan CD, Morival M, Sterk CE: Needle exchange IV drug users and street IV drug users: A comparison of background characteristics, needle and sex practices, and AIDS attitudes. In: *Community epidemiology work group proceedings*. Rockville: NIDA, june 1986: IV-16-25.
53. Hartgers C, Buning EC, Santen GW van, Verster AD, Coutinho RA: Intraveneus druggebruik en het spuitenomruilprogramma in Amsterdam. *Tijdschrift Sociale Gezondheidszorg* 1988; 66: 207-210.
54. Wit G de: Front loading: Levensgevaarlijk. *Dr. Use Good* 1990; no. 5: 3.

THE SHARING OF NEEDLES AND OTHER INJECTION PARAPHERNALIA: AN ETHNOGRAPHIC ANALYSIS

Contents

Introduction

Factors Underlying Needle Sharing

The Sharing of Other Injecting Paraphernalia

Potential Routes of HIV-Transmission in Group Drug Injection Interactions

Discussion

References

Introduction

Most of the current behavioral acquired immunodeficiency syndrome (AIDS) research consists of studies relating HIV prevalence to the prevalence of HIV-risk factors, such as needle sharing. Few published studies describe what actually happens in such needle sharing events. Given this gap in the literature, there is an obvious need for ethnographic studies that provide thick description of the patterns and circumstances of drug use and locate hitherto unmeasured variables associated with risk behaviors such as needle sharing. In the previous chapter it became clear that the notion of needle sharing only partly describes and therefore obscures the intricate interactions of which this specific, but dangerous, act is an element. Sharing behaviors have been found to be frequent and significant events for the drug users observed in this study. The sharing of valued items such as housing, food and clothing is an everyday occurrence tied to the needs of survival in extreme circumstances. The sharing of drugs, observed among both injecting drug users (IDUs) and non-IDUs, fits into this wider pattern of daily interaction and exchange. In this chapter a further analysis of unsafe injecting drug use situations is presented. The chapter will discuss the factors involved in the cases of needle sharing observed in this research. It will also address the sharing of other drug injection paraphernalia --a frequently observed activity.

Factors Underlying Needle Sharing

In 68 percent of the observed self-injection events, a new syringe was used. In 23 percent IDUs reused their own syringe. In less than 10 percent of the self-injections, a potentially unsafe syringe was reused (table 12.1). The used syringes found, or

received from others, were not adequately cleaned (e.g. water only). (1 2) The unsafe self-injections were recorded at addresses where injecting was permitted and in a public place. Because of the normal address rules against injecting, IDUs used their drugs in private settings more often than smokers. These house rules may prevent needle sharing. However, some IDUs let their friends and acquaintances inject at their place, sometimes in return for a taste of the drug. At some of these using places and at some of the house addresses that allow people to inject, clean syringes supplied by an outreach and needle exchange program were dispensed (see chapter 14). 70% of the new syringes used were of such origin. Thus, instead of sharing used syringes, IDUs shared new syringes, thereby giving the responsibility for safe injecting a collective quality, building on structural, normatively regulated interaction patterns --a very important implication for HIV prevention.

Table 12.1

Although both collective and individual norms of responsibility have been found to operate to minimize and manage the risks of needle sharing, there were a few situations in which unsafe needle behaviors were observed. The following fieldnote, for example, was recorded on the first floor of a squatted house. The house had three floors of which the first and third were in use. It did not have running water; water was carried to the house in containers from a garage next door. The house was inhabited by a group of older IDUs. At times the group offered shelter to other drug users. They also enabled other drug users to deal heroin, cocaine, or amphetamine in exchange for money and/or drugs. Occasionally they themselves dealt drugs as was the case at the time of observation. This house also was supplied with sterile syringes by the outreach program, mentioned above. However, at the time of observation it was unclear whether there were any new syringes left. Jack (the doorman) just opened the door for Billy and Dirk. They all knew one another. During the observation some other users went in and out.

Billy asks Dirk what he wants. "Let's do coke first and then a cocktail", Dirk replies. Billy has a syringe wrapped in aluminum foil. He does not want to wait for a new syringe. Dirk does not have one with him and starts searching. He asks Jack if there are any new ones left. "I don't know", Jack replies, "Maybe upstairs. Ask Karel, he's there." They call

Karel several times but he does not answer. Then Dirk finds a syringe on a cupboard. It is unclear who it belongs to. He rinses it with water. He pulls up water twice from a cup he has filled from the water container and squeezes it through the needle. Billy mumbles something about AIDS. Dirk says "Ik heb schijt aan AIDS." (I don't give a shit about AIDS).

Dirk used this syringe two times. First he shared a dose of cocaine with Billy and within 30 minutes he shared a cocktail with Billy and Jack. Both times these drugs were shared by frontloading.

In the second fieldnote, two IDUs (Eric and Anja) were in the shooting room of a house address where injecting is allowed. Leo entered the room. Leo did not come to the address to buy drugs, but to look for Eric. Eric owed him money and he had heard that Eric was at the address.

"I wanted to ask you if you can pay back or otherwise if you could help me with a shot." Leo said. Eric was not able to pay Leo back but offered a cocktail. Leo gladly accepted. "Great man, you don't know how wonderful that is, I'm so glad I didn't miss you here." However Leo was not in possession of a syringe. Leo asks Eric for a syringe: "I couldn't get a new one. The needle exchange at the Central Station had closed already". Eric tells Leo he only has his own, which he is not willing to share. Then Leo asks Anja if he can take one of her used syringes that are laying in front of her. Anja: "That's useless, they're all blunt, but if you want to try that's okay with me." She picks up several syringes from the floor and looks closely at the needle, comparing one with the other. Finally she makes her decision which one to give to Leo and gives it saying: "You have to clean it well." Leo goes with the syringe towards the sink and cleans it seven or eight times with cold water. To clean the plastic part of the needle, he moves it in such a way that there is some space between syringe and needle. He presses the plunger strongly so the plastic is cleaned under pressure. The water now does not come through the needle but shoots away through the little space between syringe and the plastic needle holder. Leo states: "It must be clean

now". Anja tells him: "Don't worry I'm checked for AIDS recently, I told Eric too".

In the following fieldnote, Mohammed and Abdul had obtained new syringes from the exchange program near the Central Railroad Station before they went to a house address to buy cocaine and heroin. Not allowed to inject at the address, they went to a small greenhouse in a park. Mohammed prepared the jointly bought drugs. He then divided them by frontloading. Abdul wanted to check if the solution was equally divided between both syringes.

Mohammed gives both syringes to Abdul and asks him: "Don't you trust me?" Abdul doesn't answer. He holds the syringes next to each other and stares at them. While doing this he accidentally drops a syringe. The needle falls straight onto the ground. Abdul curses and so does Mohammed. Mohammed says: "Now you see what happens, why don't you believe me?". Abdul picks up the syringe and looks closely at the needle. He asks Mohammed if he still can use it. Mohammed takes the syringe and runs the needle tip over his thumbnail. "No", he says, "there is a burr on it. It's not sharp any more and it's dirty. You've got to get a new one". Abdul: "No, I don't go back, give me yours".

Mohammed: "Then you have to wait until I'm ready". After Mohammed has taken his shot he starts cleaning his syringe with the water from the bottle. He puts some lemon juice in the cooker again, pulls it into his syringe and shakes it so that it mixes with the water. He puts the needle back on it, holds it with two fingers, and presses the water/lemon solution through it as hard as possible. Mohammed explains: "the lemon bites and cleans the needle better". When he's ready, he puts the needle on Abdul's syringe.

The examination of these three fieldnotes indicates that needle sharing often is the result of complex and multiple factors. It is important to ascertain that in all of the fieldnotes, needle sharing took place as an element of a drug sharing sequence. In none of the fieldnotes, the use of another's syringe was, however, planned. Rather an unexpected situation occurred. In the first fieldnote, Billy and Dirk select the

particular address because injection is allowed and new syringes are available. However, at the time of entering new syringes were not available. In the second fieldnote, Leo did not have the money to buy drugs but, by coincidence, learned that Eric, who owed him money, was at the address. He did not have a syringe as he had been too late at the needle exchange. In the last fieldnote, although sufficient prevention measures were taken in advance, an unfortunate accident puts one of the users at risk.

In all three situations an unanticipated change puts the IDUs in the uncomfortable position of choosing between postponing/abstaining from a shot and an unsafe injection. They all chose for the unsafe injection although they were well aware of the potential risks of their behavior as evidenced by their rather intensive efforts to clean the used syringes. In the first two fieldnotes, AIDS is associatively mentioned while cleaning the syringes while in the last fieldnote the use of lemon is presented as a cleaning method superior to using water only. However, the existence of AIDS-related knowledge as an effective protecting factor can be seen as dependent on certain specific situational factors.

The significance of one of these situational factors, the intensity of drug craving, deserves special attention. Shortly before an injection, IDUs can often be observed to become highly aroused. This arousal leads to preoccupation with the sequence that relieves withdrawal or craving. (3) For some IDUs, this sequence begins when the drugs are obtained. For others, the preparation of the injection is the starting point. As one IDU put it: "As soon as I put it on the spoon my stomach turns around and I know it's gonna happen, I'm gonna feel that intense rush". In all of the presented cases, postponing the injection would have caused noticeable stress. In the first fieldnote, Billy and Dirk were in high anticipation of an injection. They had already visited the address 30 minutes earlier, expecting to find a dealer working. However, the dealer had just left, so they went to another to buy. When they returned Billy complained that it had taken them considerable trouble to find a dealer. Dirk did not bother to see if there were any new syringes upstairs. By this time, the drug craving had become too intense for further deferral. Leo (second fieldnote) explicitly expressed relief when he was offered an injection. In the last fieldnote, the accident happened only seconds before actual injecting. Obviously, the craving of Abdul has become so intense that he ignores Mohammed's advice to obtain another syringe.

Furthermore, in all cases cocaine or a mixture of cocaine and heroin was injected. The addition of cocaine to the daily drug-using rituals has been observed in the field to be associated with an intensification of craving and a disruption of stabilized heroin- methadone patterns.

While situational factors play the most important role in needle sharing, certain personal factors can also be seen. One such factor is that of socially learned experience with the injecting ritual, internalized during the IDU career. This experience includes, among other things, protective skills that support safe needle use. The interaction between Billy and Dirk provides an illustration of this factor. To inject, Billy, an experienced IDU, went to a place where normally clean syringes are available. Nevertheless, he carried his own used syringe anticipating the absence of new ones. In contrast, Dirk, a novice IDU with no visible needle marks, did not bring a syringe. Immediately after injecting cocaine, he began smoking heroin. He identified himself, not as injector, but as a smoker, stating: "I'm only shooting now and then, strictly speaking I am a chaser" (chaser). Irrespective of his AIDS knowledge, Dirk's particular self-deception works against taking the appropriate precautions. His self-perception as a chaser provides a false sense of security that, in turn, leads to blase attitudes such as "I don't give a shit about AIDS". In the last fieldnote, another case of inadequate socialization is found. Both users were still at an early point in their injecting careers. Mohammed, who reported he had been injecting for about half a year, is instructing the even less experienced Abdul who was about to take his 10th lifetime injection.

The Sharing of other Drug Injecting Paraphernalia

Even in injecting drug use situations where needle sharing does not occur, there may be hidden risks that are the result of related practices. Drug users often share other paraphernalia, such as knives, lighters, spoons, water cups, ties and filters and chemicals, such as stomach salt (baking soda or bicarbonate) or ammonia (both used in preparing crack-cocaine) and acidifiers, such as lemon juice or ascorbic (to dissolve the heroin). These tools and materials are all used in the process of preparing the drug for consumption and some of these are supplied at house addresses.

In general, there is no exchange of body fluids involved in the sharing of chasing paraphernalia, but sharing chasing tubes may transmit minimal quantities of saliva resulting in the spread of, for example, bacteria and viruses that cause mouth sores, colds, influenza and maybe even hepatitis. Thus these practices normally include no risks of HIV transmission. IDUs' sharing of knives, lighters and tourniquets is also without risks. The sharing of citric and other acids probably presents no risks, because of the aggressive properties of these agents. Infection may result from sharing water containers, spoons and filters.

Water is an important ingredient for IDUs --it is necessary to dissolve the powder drugs. When available IDUs will generally take water from a tap. However, when the injection is taken at a place without running water (e.g. a squat) often the water is stored in cups, bottles or a jerrican:

Frits went to a jerrican with water and with the syringe (without the needle) he pulled out some water. He then poured a bit on the spoon.

Cleaning a syringe with water from a container for common use may contaminate this container. Virological studies have demonstrated that HIV can survive in tap water for an extended interval. (1) In tap water at room temperature, the virus can survive for over one week. (4) Consequently, using water from a jointly used container to prepare an injection may be a means of viral transfer. It can contaminate every item that is part of the user's injecting set, even when these are new or cleaned beforehand. (5)

Two factors are of importance in regards to the transmission of HIV via water. First, there is the drug injected. Injecting cocaine or amphetamine alone may carry more risk than an injection of heroin or a cocktail of heroin and cocaine or amphetamine, as these drugs are generally dissolved without heating (cold shake). When heroin is involved the solution must be heated which may kill the virus. This is, however, dependent on both the temperature and the time of heating. (6) Moreover, due to the chemical form (a base) of the heroin, marketed in the Netherlands, users use an acidifier to dissolve the heroin in water. This acid may also impact on the potency of the virus. A recent Scottish study found that the usual vinegar solutions used by Glaswegian IDUs to prepare heroin for injection inactivated both cell-free and cell-associated HIV. (7)

The second important point is the quantity of HIV positive blood in the water container. The probability of infection presumably depends on the quantity of virus exchanged. Recent simulations of needle sharing have found the volume of transferred blood from index user to first sharer to range from 0.51 ml to 28.36 ml, depending on syringe size, booting and rinsing. (8) In another study the mean volume recovered in needle sharing simulations was 34 ml. (9) These volumes are, however, more dependent on the type of syringe than on the barrel size, whereby 1 ml insulin syringes with fixed needles hold considerably less residue than syringes with detachable needles. (10) Information specifying the concentration of HIV in blood and the likelihood of infection in vivo is unavailable, (8) but a relationship between the amount of virus and the chance of infection has been suggested. (11) As the concentration of blood and consequently the volume of HIV in water containers is in general significantly lower than in used syringes, the chance from infection by sharing water is probably lower than when sharing or frontloading with unclean syringes, although the minimum quantity of HIV capable of infection is unknown. Therefore, the availability of water, the size of the container, the frequency of use and the number of users may be all of influence. In abandoned buildings without running water, Koester et al. observed containers with water that had turned pink from blood. (5) In this research, such extreme situations were not observed. Spoons are often readily available on dealing / use addresses and used by both smokers (to prepare base-cocaine) and IDUs. Spoon sharing is probably the most common form of paraphernalia sharing. But in none of the observations of the sharing of spoons (or other drug paraphernalia) could a ritual interaction pattern be detected. Spoons are shared in the same manner as coffee users may lend or borrow a spoon. To illustrate a more or less typical situation of spoon sharing the following excerpt from a fieldnote is presented:

John starts to prepare a shot of heroin. He takes a spoon from a cup which contains several and throws the content of the paper in the spoon. [...] In the meantime Cor has entered the place. He has a quarter of cocaine and uses the same spoon as John did to prepare an injection.

Most IDUs use filters when drawing the solution into the syringe prior to injecting. The main purpose of this step is to screen out undissolved particles that may clog the needle. (5) This is a universal practice, as even when the powder is totally dissolved, one uses a filter. Wadding and cigarette filters are most commonly used. A piece of tissue can also be used. When these are not available the user will often take some lint from her/his clothing. It is not unusual to leave the filter in the spoon for the next injection:

Jack puts the coke in a tea spoon which he takes out of the open low cupboard he is preparing his shot on. In the spoon already is wadding filter. He gets a cup of water from the tap, pulls up some water with his syringe and squirts some in the spoon.

One reason for saving the filter in the spoon is that a residue of the drug remains on the spoon and in the filter:

Bert has just used Patrick's spoon to prepare a shot. Patrick then wanted his spoon back. "Here it is", Bert said, "look there is still some dope on it", as if it was a gift.

Some IDUs save the filters and inject the extract in bad times when they run out of drugs and money. Injecting the extract may lead to a, by many users feared, syndrome, characterized by symptoms, such as sudden chills and trembling over the entire body, muscle aches, headache, nausea and fever, believed to result from an acute reaction to a bacterial infection. (12) Because of the manifest trembling, this syndrome is known under the local argot term the shakes. When a fellow user in need of a dose is granted such savings, this syndrome seems probably the smallest risk. The practice of reusing and sharing filters is yet another opportunity for HIV transmission, as blood rests may easily remain in the fabric of the filter. Even when the liquid vaporizes and the presumed blood and virus in the filter (or in the spoon or other injecting paraphernalia) dry, these remain infective. (2)

A possible facilitating factor of paraphernalia sharing and contamination with HIV or other blood-borne infections is related to the physical condition of the veins of IDUs.

A considerable number of IDUs suffer from collapsed veins resulting in great difficulties with injecting, as is witnessed in the next fieldnote:

When shooting up Harrie uses a hemp rope to tie his arm. He is having problems finding a vein. He tries several spots on his left arm but he does not succeed. Then he tries his other arm, also without success. He is already bleeding from several spots. He sits on the floor rolls up his pants and tries his left leg and the other. Finally he succeeds. He washes the blood from his arms and legs with a rag and some water. With the same rag he sweeps the blood he dripped on the floor away.

In such situations hygiene is clearly subordinate to the difficult task of injecting, resulting from, paradoxically, the same lack of hygiene and high injection frequencies in combination with poor self-injection skills. Sometimes it can take so much time to get a hit that the solution clogs in the needle or the syringe is completely filled with the blood-drug mixture. As a result, the plunger cannot be pulled back anymore and the solution is squirted back on the spoon with the possibility of contamination. Female users, in particular when frequently using cocaine, may be more susceptible to these problems, as women, in general, have smaller and harder to hit veins. (13) Such was the case in the following fieldnote. In this fieldnote, Anja, a 24 year old white Dutch female, is sitting in the attic of a dealing place for about two hours, trying to get a hit. (This observation was recorded in the same room prior to the observation of the needle sharing interaction between Anja and Leo in section 12.2.) She is surrounded by pieces of toilet paper, some with blood spots, old syringes containing blood rests, her spoon and a plastic lemon. Her left underarm and hand are streaked with dried blood. She is bleeding out of several injection sites. Then Eric came in:

"Look how I'm looking"; she says; I can't hit a vein, I'm trying for more than an hour." She removes the long, thin piece of textile she is using to bind off, from her arm and turns it around her wrist. She wants to try her hand again. She sticks in the needle several times, turning it around under her skin in search of a vein. The syringe is filled with blood. She groans when she moves the needle around under her skin. Eric tells her to watch out for the blood to congeal. "Otherwise it will choke up

your needle", he says. Anja replies, "I know, I have put it back on the spoon two times already, heated it and pull it back in again through the filter." She is pointing towards the spoon with the bloody filter still in it, while the syringe stays in her other hand. Eric asks her now if he can use her spoon to prepare his shot. Anja says, "Okay, but you have to clean it proper". Eric takes the spoon from the ground, walks with it to a garbage can aside of the table and with a piece of paper he took from the table he wipes the bloody filter out of the spoon. Then he walks towards the sink and cleans the spoon thoroughly with cold water and a piece of toilet paper. When he's finished he carefully examines the spoon to see if he has cleaned it well.

Ensuing Eric uses Anja's spoon to prepare his shot. Then Anja uses the spoon to reboil her dose of gravy (the mixture of the drug solution and blood) for the third time. A little later Leo comes in. He gets some drugs from Eric --who owes him money-- and also uses Anja's spoon, after cleaning it with water and toilet paper.

Difficulties with injecting due to collapsed veins can increase the risk of HIV-infection in several ways. Someone will be more eager to borrow a needle when, as a result of persistent failure to enter a vein, the needle has become dull or clogged (Anja asked Eric, but he refused), but the syringe may also get filled with blood to the point the plunger cannot be pulled back further and the gravy has to be put back in the spoon, thereby fouling the spoon. As the preceding observation of Harrie shows, the multiple skin and vein punctures can result in blood contact with materials, that may be reused by others.

Figure 12.1.A

Figure 12.1.B

Potential Routes of HIV-Transmission in Group Drug Injection Interactions

The preceding two sections discussed the contexts of drug injection interactions that may put the actors at risk for HIV-infection. The following figures summarize these interactions and present the potential routes of viral transmission.

Figure 12.1.A plots the routes in the first interaction between Billy and Dirk. Dirk can become infected from the syringe he picked up (route A) and from receptive

frontloading, that is, having Billy squirt the drug solution into his syringe (route B). Billy can become infected from insertive frontloading --inserting his needle in the syringe Dirk found (route C). These risks may have been exacerbated, as they inject cocaine. Preparing a shot of cocaine was done by cold shaking, without adding heat - which may affect the virus. Figure 12.1.B plots the routes in the succeeding interaction between Billy, Dirk and Jack. As in the preceding drug sharing interaction, Dirk can become infected from the syringe he found and from Billy's syringe (routes A and B). Billy can become infected from the syringe Dirk picked up, but now that Dirk used it, also from Dirk (routes C and D). He furthermore loads Jack's used syringe (insertive frontloading), which means a third infection possibility (route E). Through receptive frontloading Jack can become infected from Billy's needle (route F), but as Billy's needle may have picked up virus particles when loading the Syringe Dirk picked up, it can also transfer these to Jack's syringe (routes G and H).

Figure 12.1.A and 12.1.B clearly demonstrate the intricacy of risk behavior associated with drug injecting in groups. In these interactions infection could have taken place via at least 11 transmission routes.

In the situation presented in figure 12.2 two distinct high risk interactions can be observed. Eric used Anja's spoon to prepare his shot (route A) and leo borrowed Anja's spoon (route B) and one of her used syringes (route C). Both the spoon and the syringe contain blood rests. All actors were aware of the potential risks of these exchanges. AIDS is not only discussed, but extensive efforts were undertaken to clean Anja's works before use. However, water is generally considered an insufficient disinfectant. (1 2) As a result, HIV may have been conveyed via three distinct routes.

Figure 12.2

Figure 12.3 represents a situation in which the actors both possessed new syringes. They bought drugs from the money they made together. The drugs were divided by frontloading, but only because they both used new syringes this is without risk. But, nothing is so certain as the unexpected --by accident Abdul dropped his syringe and damaged the needle which resulted in an infection risk for Abdul.

Figure 12.3

As all men in the situation presented in figure 12.4 used new syringes, again, this interaction appeared harmless. But in this case appearance is deceptive, as the use of the collective water container may have resulted in three routes of transmission.

Figure 12.4

Figure 12.5

Figure 12.5 indicates three routes of transmission: To prepare a shot of heroin John took a spoon from a cup, which contained several for common use (route A). Shortly after him, Cor used the same spoon to prepare a shot of cocaine (route B and C). The route leading from John to Cor may bear the highest risk (route C). Cor hardly cleaned the spoon before use and he cold-shaked his cocaine injection. The probability of viral transmission may have increased considerably, due to these two factors.

Transmission risks may further increase when filters are left in a used spoon and reused with that spoon. The routine sharing of spoons is often an unconscious practice. As pointed out, spoons belong to the standard inventory of most house addresses and are used by both IDUs and non-IDUs --who use spoons to prepare cocaine for smoking, normally using ammonia. Ammonia as well as lemon, ascorbic or vinegar --used to acidify the solution when preparing a heroin injection-- may affect the virus. (7) In particular ammonia seems to qualify. Spoons at addresses where both smoking and injecting is practiced may thus be safer, than those exclusively used by IDUs. Not only in the interactions in figures 12.1.A, 12.1.B and 12.5 spoons played a role, in the other cases they may also have been additional transmission vectors.

Except in the case presented in figure 12.5, the shared use of water containers and spoons, needle sharing and frontloading took place in the context of sharing drugs. This, again, demonstrates the drawbacks of the concept of needle sharing. It is too narrow to describe the intricate interactions that may put IDUs at risk for HIV-infection.

Discussion

Increased availability of drugs is thought to affect consumption by increasing the prevalence of use. (14) Less attention has been given to the harmful effect of decreased availability of drugs. Availability-related variables, such as rising prices, decreasing purity, and unstable supplies can be seen as factors determining the onset of injecting. (15 16 17) The results presented in this dissertation show that if availability variables are held relatively stable over time, minimizing economic

pressure to initiate and maintain injecting, a predominant smoking pattern can develop. Thus, injecting can be seen as adaptation to the conditions of decreased drug availability.

The availability of needles plays a major role in needle sharing. (16 18 19 20) A convincing illustration of this factor is the high prevalence of needle sharing in prison. (21) Traditionally, in the Netherlands, syringes have been easily obtainable. Since the AIDS epidemic the availability of syringes has increased due to the needle exchange programs. Furthermore, in contrast to other countries, the possession of injecting equipment has never been a cause of arrest in the Netherlands. (13 16 18 22 23) Risk of arrest discourages IDUs from carrying their personal injection equipment which limits so called on the spot availability, thereby increasing the frequency of sharing drug paraphernalia. The most dramatic indication of the importance of availability is the comparison of the low syringe sharing rates in the United Kingdom (24 25) and the Netherlands, (26) and the high rates in many cities of the U.S.A. (27) The results of this field study support the hypothesis that under the conditions of stable availability of drugs and syringes and a decriminalization of possession, needle sharing decreases markedly. Nevertheless, research in Europe and the United States is documenting that IDUs are changing their behavior toward less risky injecting practices, despite the absence of Dutch conditions. (24 28 29 30 31 32) There seems to be a growing awareness of health and a willingness to use drugs in safer, more responsible ways. The field research found only a small incidence of irresponsible behavior in inexperienced IDUs or those experiencing craving intensified by cocaine. Several recent studies have shown a relationship between cocaine use, risk behaviors and HIV-serostatus. (33 34 35 36) In numerous studies, the social organization of the drug subculture has also been associated with needle sharing. Drug users are often organized in small friendship groups. (37 38) These friendship groups are often linked in networks whose paramount activity is to obtain and distribute money and drugs (37 38) Both items are often shared and used together with other necessities of life. Sharing and its associated pattern of reciprocal aid provides a practical and emotional balance of the daily hardship of addict life. In the pre-AIDS era needle sharing fitted snugly into this pattern. Helping a fellow addict with a syringe was an expression of the almost universal subcultural code of share what you have. (39) These sharing behaviors

function not only to satisfy individual craving, but also to support the maintenance of the network through the expression of community solidarity and the instrument of economic exchange. (37) In the AIDS era, needle sharing has lost its functionality, being transformed into a threat to the individual drug user, the friendship groups, networks, and the drug subculture as a whole. As with most cultural shifts, the process is gradual and never complete. Residues of the traditional code still remain and can be observed in emotional appeals and convenient lapses in newly acquired knowledge.

Paralleling other studies, the presented results show that, even under the most optimal conditions, IDUs can and do get into situations in which sterile injection equipment is not available. In contrast with novice IDUs, experienced injectors are likely to be more competent in managing such situations. (24 40) Continued risk behavior among IDUs has been associated with perceived availability (41 42) and group differences in obtainability, whereas minority IDUs experience more problems in acquiring new syringes. (43) Poly drug use, benzodiazepine use, psychiatric problems and fatalism are also associated with needle sharing, (44 45 46) as was injecting at shooting galleries. (44 47) These factors may, however, largely correlate with social factors, which negatively impact on a person's life structure, such as unstable living conditions, homelessness, poverty and absence of perspective on improvement. (13 25 46 48)

In conclusion, these findings suggest that needle sharing often is the outcome of structurally or situationally determined social interaction. Knowledge alone is not enough to counter the pressure of social interaction and drug craving. If clean syringes are not easily available in these stressful situations, the magnitude of addiction will ultimately lead IDUs to unsafe injection practices. While easy access and sufficient supply of clean syringes is effective, as van de Hoek, et al. conclude, (26) it is not enough. They recommend intensive counseling in future prevention education efforts. The findings also support their suggestion by identifying a number of factors that determine needle sharing. These factors should be addressed in counseling that focuses on the practical skills of safe drug use. Furthermore, the results indicate that changes in the social environment may be more important than changes in individual risk behaviors. Prevention efforts may be made more effective through the mobilization of collective social resources directed at preventing risk

situations. IDUs and their networks should have a prominent role in such approaches, an idea that is getting more attention. (49 50) In Rotterdam the findings have shown that outreach programs that work together with IDUs to reinforce positive protective factors such as rules of safe use while, at the same time, distribute syringes to unknown IDUs via known ones can be effective in changing the environment (see chapter 14). Utilizing the knowledge of drug users and their information and exchange networks in promoting risk reduction through peer education and peer support might offer more perspective on a lasting behavior change than any other prevention effort.

References

1. Resnick L, Veren K, Salahuddin SZ, Tondreau S, Markham PD: Stability and inactivation of HTLV- III/LAV under clinical laboratory environments. *JAMA* 1986; 255: 1887-1891.
2. Martin LS, McDougal JS, Loskoski SL: Disinfection and inactivation of the human T-lymphotropic virus type III/lymphadenopathy-associated virus. *J Infect Dis* 1985; 152: 400-403.
3. Wikler A: A theory of opioid dependence. In: Lettieri DJ, Sayers M, Pearson HW (eds.): *Theories on drug abuse*. Rockville, Md: National Institute on Drug Abuse, 1980.
4. Barre-Sinoussi F, Nugeyre MT, Chermann JC: Resistance of AIDS virus at room temperature. *Lancet* 1985; 2: 721-722.
5. Koester S, Booth R, Wiebel W: The risk of HIV transmission from sharing water, drug-mixing containers and cotton filters among intravenous drug users. *International Journal on Drug Policy* 1990, 1(6): 28-30.
6. McDougal JS, Martin LS, Cort SP, Mozen M, Heldebrant CM, Evatt BL: Thermal inactivation of the Acquired Immunodeficiency Syndrome Virus, Human T Lymphotropic Virus-III/Lymphadenopathy- associated Virus, with special reference to antihemophilic factor. *Journal of Clinical Investigation* 1985; 76: 875-877.
7. Goldberg DJ, FLYnn N, Green ST, Jain S, Watson H, Keddle E: The disinfectant potential of vinegar solutions used by Glasgow IDUs to prepare heroin for injection. Poster presentation V International Conference on AIDS, Montreal, Canada, 1989. [Abstract no. Th.D.P.55]
8. Gaghwin MD, Gowans E, Ali R, Burrell C: Bloody needles: the volumes of blood transferred in simulations of needlestick injuries and shared use of syringes for injection of intravenous drugs. *AIDS* 1991; 5: 1025-1027.
9. Hoffman PN, Larkin DP, Samuel D: Needlestick and needleshare --the difference. *J Infect Dis* 1989; 160: 545-546.
10. Grund JPC, Stern LS: Blood rests in Syringes; Not only the size matters, but also the type of syringe. *AIDS* 1991; 5(12): 1532-1533.
11. Friedland G, Klein R: Transmission of the human immunodeficiency virus. *New Engl J Med* 1989; 321: 1621-1625.
12. Froner G: *Digging for diamonds: A lexicon of street slang for drugs and sex*. San Francisco: Health outreach team productions, 1989.

13. Murphy S: Intravenous drug use and AIDS: notes on the social economy of needle sharing. *Contemporary Drug Problems* 1987; 14: 373-395.
14. Goldstein A, Kalant H: Drug policy: striking the right balance. *Science* 1990; 249: 1513-1521.
15. Casriel C, Rockwell R, Stepherson B: Heroin sniffers: between two worlds. *J Psychoactive Drugs* 1988; 20(4): 37-40.
16. Power RM: The influence of AIDS upon patterns of intravenous Use- Syringe and Needle Sharing- among illicit drug users in Britain. In: Battjes RJ, Pickins RW (eds): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 75-88.
17. Parker H, Bakx K & Newcombe R: *Living with heroin: The impact of a drugs 'epidemic' on an English Community*. Philadelphia: Open University Press, Milton Keynes, 1988.
18. Feldman HW, Biernacki P: The ethnography of needle sharing among intravenous drug users and implications for public policies and intervention strategies. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 28-39.
19. Robertson JR, Bucknall ABV, Welsby PD, Roberts JJK, Inglis JM, Peutherer JF, Brettell RP: Epidemic of AIDS related Virus (HTLV-III/LAV) infection among intravenous drug abusers. *BMJ* 1986; 292: 527-529.
20. Newmeyer JA, Feldman HW, Biernacki P, Watters JK: Preventing AIDS contagion among intravenous drug users. *Medical Anthropology* 1989; 10: 167-175.
21. Rahman MZ, Ditton J, Forsyth JM: Variations in needle sharing practices among intravenous drug users in Possil (Glasgow). *British Journal of Addiction* 1989; 84: 923-927.
22. Olievenstein C: Drug addiction and AIDS in France in 1987. In: Battjes RJ, Pickins RW (Eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988, pp 114-118.
23. Pascal CB: Intravenous drug abuse and AIDS transmission: Federal and state laws regulating needle availability. In: Battjes RJ & Pickins RW (Eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988, pp 119-136.
24. Stimson GV, Alldritt LJ, Dolan KA, Donaghoe MC, Lart RA: *Injecting equipment exchange schemes: final report*. London: Monitoring Research Group, 1988.
25. Donaghoe MC, Dolan KA, Stimson GV: *Life style factors and social circumstances of syringe sharing in injecting drug users*. London: Centre for Research on Drugs and Health Behaviour, 1991.
26. Hoek JAR van den, Haastrecht HJA, Coutinho RA: Risk reduction among intravenous drug users in Amsterdam under the influence of AIDS. *Am J Public Health* 1989; 79: 1355-1357.
27. Battjes RJ, Pickins R, Amsel Z: Trends in HIV-infection and AIDS risk behaviors among intravenous drug users in selected U.S. cities. presented at the VII International Conference on AIDS, Florence, Italy, 1991. [Abstract no. Th.C.46].
28. Kokkevi A, Alevizou S, Stefanis C: AIDS related behavior and attitudes among IV drug users in Greece. presented at the V World AIDS Conference, Montreal, Canada, 1989. [abstract no. TH.D.P.72]
29. Guydish J, Abramowitz A, Woods W, Newmeyer J: Sharing needles: Risk reduction among IVDU's in San Francisco. presented at the V World AIDS Conference, Montreal, Canada 1989. [abstract no. TH.D.P.34]

30. Des Jarlais DC, Friedman SR, Hopkins W: Risk reduction for the acquired immune deficiency syndrome among intravenous drug users. *Annals of Internal Medicine* 1985; 103: 755-759.
31. Kall KI, Olin RG: HIV status and changes in risk behavior among intravenous drug users in Stockholm 1987-1988. *AIDS* 1989; 4: 153-157.
32. Watters JK, Cheng Y, Segal M, Lorvick J, Case P, Carlson J: Epidemiology and prevention of HIV in intravenous drug users in San Francisco. VI International Conference on AIDS, San Francisco, U.S.A. 1990 [Abstract no. F.C.106].
33. Wiebel W, Ouellet L, Guydan C, Samairat N: Cocaine injection as a predictor of HIV risk behavior. presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. F.C.767]
34. Schoenbaum, EE, Hartel, D & Friedland GH: Crack use predicts incident HIV seroconversion. presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. Th.C.103]
35. Woods WJ, Abramowitz A, Guydish J, Clark W, Hearst N, Kiefer R: Predicting needle sharing behavior of IVDUs in treatment. presented at the V International Conference on AIDS, Montreal, Canada, 1989. [Abstract no. W.D.P.74]
36. Clark W, Guydish J, Abramowitz A, Woods WJ, Sorensen J: Cocaine use associated with increased risk for IVDUs who share needles. presented at the VI International Conference on AIDS, San Francisco, U.S.A., 1990. [Abstract no. F.C.764]
37. Des Jarlais DC, Friedman SR, Sotharan JL, Stoneburger R: The sharing of drug injection equipment and the AIDS epidemic in New York City: The first decade. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 160-175.
38. Preble E, Casey JJ: Taking care of business - the heroin user's life on the street. *Int J Addict* 1969; 1: 1- 24.
39. Wieder DL: Telling the code. In: Turner R (ed): *Ethnomethodology: selected readings*. Middlesex, England: Penguin Education, 1974: 144-172.
40. Schilling R, El-Bassel N, Schinke S, Botvin G: Risk behavior and attitudes among recovering IV drug users. Presented at the V World AIDS Conference, Montreal, Canada, 1989. [abstract no. TH.D.P.42]
41. Rezza G, Fausto T, Tempesta E, Di Giannantonio M, Weisert A, Rossi GB, Verani P: Needle sharing and other behaviours related to HIV spread among intravenous drug users. *AIDS* 1989; 3: 247-248.
42. Carballo M, Rezza G: AIDS, drug misuse and the global crisis. In: Strang J, Stimson G: *AIDS and Drug Misuse*. London and New York: Routledge, 1990: 16-26.
43. Ostrow DG: AIDS prevention through effective education. *Deadalus* 1989; 118(3): 229-254.
44. Klee H, Faugier J, Hayes C, Boulton T, Morris J: AIDS related risk behavior, polydrug use and temazepam. *British Journal of Addiction* 1990; 85: 1125-1132.
45. Metzger D, Woody G, De Philippis D, McLellan AT, O'Brian CP, Platt JJ: Risk Factors for Needle Sharing among Methadone-treated Patients. *Am J Psychiatry* 1991; 148:636-640.
46. Murphy S, Waldorf D: Kickin' down to the street doc: Shooting galleries in the San Francisco Bay Area. *Contemporary Drug Problems* 1991; 18(1): 9-29.
47. Schoenbaum EE, Hartel D, Selwyn P, Klein RS, Davenny K, Rogers M, Feiner C, Friedland G: Risk factors for human immunodeficiency virus infection in intravenous drug users. *New England Journal of Medicine* 1989; 321(13): 874-879.
48. Klee H, Faugier J, Hayes C, Boulton T, Morris J: Factors associated with risk behavior among injecting drug users. *AIDS Care* 1990; 2: 133-145.

49. Des Jarlais DC, Friedman SR: Shooting galleries and AIDS: Infection probabilities and 'tough' policies. *Am J Public Health* 1990; 80: 142-144.
50. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. *Am J Public Health* 1990; 80: 150-152.

IS NEDDLE SHARING A RITUAL?

Contents

Introduction

Ritual Aspects of Needle Sharing: A Review of the Literature

Needle Sharing and Conditions for Ritualization

Who Propagate the Needle Sharing Ritual

Conclusions

References

Introduction

The exchange of infected blood from user to user during the injection process is currently believed to be the primary means of transmission of the Human Immunodeficiency Virus (HIV) among injecting drug users (IDUs). (1, 2, 3, 4) Such blood-blood contact can be established through various routes, of which needle sharing has received the bulk of attention in both the mass media and the scientific literature. As is established in the previous two chapters, this has blurred the view on other, distinct, potentially hazardous parts of the process of preparing and self-administering an injection of drugs. Sharing water, used for cooking and rinsing, sharing of other drug injection paraphernalia, and, most notably, sharing of collectively prepared drug solutions can all include risks of viral transmission. But, needle sharing is a limited concept for more reasons. While lending, borrowing, passing on and renting a syringe may be covered by the term, from a semantic point of view, picking up a needle that another user left behind (as Dirk did in chapter 12.2) can hardly be called an act of sharing. After all, sharing requires at least two participants.

This subtle, but important semantic distinction is also of main interest to the question dealt with in this chapter: Is needle sharing a ritual? In the context of this dissertation this question cannot be omitted. But besides theoretical, there are also pragmatic public health considerations. For one thing, if needle sharing is a ritualized behavior, this should have consequences for education and prevention campaigns aimed at IDUs. And in fact, the argument that needle sharing is a ritual is often put forward in

objections to harm reduction oriented approaches towards the HIV epidemic among IDUs, such as needle exchange. This chapter will explore the question whether or not the sharing of needles is a self-perpetuating ritualized part of injecting drug use. First, it will review the existing literature on ritualized needle sharing. In this review special attention will be directed at the terminology and definitions used. It will critically examine statements and conclusions made and extensively screen data presented and the references these are supported with. Secondly, needle sharing will be discussed in light of the definitions and theories of ritual and the findings reported in this thesis. From the preceding linguistic discussion it can already be derived that not all events that are generally included in the term needle sharing are expressions of ritual. Picking up and using a left behind fit can impossibly be considered a ritual. The coincidental nature of such an event excludes the development of a stereotypical sequence--a basic requirement of ritual. Furthermore, a symbolic goal cannot be distinguished in this incident, as sharing requires more than one person. It takes two to tango. The primary focus of this discussion will be if, and under what conditions needle sharing can be regarded a ritual behavior. Finally, the chapter will investigate who herald the notion of ritual needle sharing--on what do they base their statements; what are their motives.

Ritual Aspects of Needle Sharing: A Review of the Literature

In preparing this review it was surprising to learn that little is written about actual needle sharing events in their socio-cultural context. Even less studies discuss or mention ritual in relation to needle sharing. An extensive review produced 13 papers which discussed ritual or symbolic aspects of needle sharing. Eight of these were published by (US) American, one by Canadian and four by European authors.

The first two highly derivative articles, by Tempesta and Di Giannantonio, discuss the relations between needle sharing and the high prevalence of HIV among Italian IDUs. Despite the alleged absence of restrictions for over the counter sale of syringes and needles, the HIV-seroprevalence in Italy is among the highest in Europe, which is, as Moss writes, indeed alarming.⁽⁵⁾ This so-called Italy argument has also been put

forward against needle exchange and other efforts to liberalize the availability of injection equipment, e.g. in the USA. Tempesta and Di Giannantonio explain the high Italian HIV seroprevalence rates in terms of "insufficient knowledge" and "ritual and special patterns of behavior." (6) The authors claim that in their study, HIV-seropositive IDUs tended to share needles for ritual and habitual reasons, while the HIV-seronegative IDUs shared because of temporary difficulties in finding a syringe. In both groups promiscuity was common, but, according to the authors, in the former group this behavior had ritualistic characteristics, while in the latter group promiscuity seemed due to circumstantial reasons. It is unclear what the authors mean with this statement. A study into the sexual practices of 1214 Italian heterosexual IDUs did not mention such peculiarities.(7) They describe the former group as "heavily conditioned to the ritualistic and social use of drugs in which needle sharing has a high symbolic meaning." (8) "[T]heir peculiar psychopathology prevents them from being sensitive to prevention-promoting campaigns. Moreover, for this group, every injection is a symbolic challenge to death. Thus, these subjects feel a drive for drugs which is stronger than any other consideration."(6)

In neither article do the authors define the terms they use and their bold statements are not supported by the presented data or by references. The impression of IDUs they present bears more resemblance to a tabloid caricature than a scientific representation of research results.

The paradoxical Italian situation--absence of official restrictions on needle availability and a high infection rate--may well be explained by a combination of alternative, more down-to-earth, factors. For example, Rezza et al. found that almost half of their IDU subjects affirmed to have shared needles because of unavailability.(9) Furthermore, apparently citing the Rezza et al. study (without reference), Tempesta and Di Giannantonio add that nine percent shared "because syringe purchase presented problems." (8) This suggests a discrepancy between the official availability in pharmacies and drug stores, and the actual availability, as experienced and perceived by IDUs. Tempesta's and Di Giannantonio's allusion that pharmacists might refuse to sell syringes to IDUs may be an important factor underlying the discrepancy between official syringe policies and IDUs' perceived availability of injection equipment. Several Italian heroin users at the Rotterdam Central Railway

Station denied that syringes can be purchased without prescription in pharmacies and drug stores.(10) This situation is not specific for Italy, as in both the Netherlands and in most parts of the United Kingdom syringes and needles have never been scheduled, but significant numbers of pharmacists are, both before and after the consequences of needle sharing for the AIDS epidemic became apparent, reluctant to sell syringes to IDUs.(11, 12, 13) The Italian situation is presumably exacerbated by a disastrous combination of a lack of knowledge about HIV and AIDS and an insufficient or too late educational intervention. Feldman and Biernacki compared the Italian situation with the San Francisco gay scene in the first stage of the epidemic:

[C]ondoms were available to gay men in San Francisco during the period when the virus was spreading through the homosexual population. The fact that they were not used seems more the result of gay men not knowing that unprotected sex, particularly anal intercourse, allowed the virus to enter their bodies. The missing ingredient, we are suggesting is the concerted education campaign ... (14)

In the Rezza et al. study nearly 20% of the people, who reported that they never shared needles, were seropositive.(9) Therefore, other risk behaviors conceivably have played a role in the rapid spread of HIV among Italian IDUs. These may be sexual practices, such as high levels of unprotected sex, or drug use related, such as frontloading or similar drug sharing practices.

In Britain, the ethnographer Power noted that "there is no ritualism associated with the sharing of needles and syringes. ...Sharing in Britain results from the shortage of freely available needles and syringes."(13) The needle exchange evaluation studies by Stimson et al. confirmed this view. They showed that in Britain needle sharing is largely determined by availability problems, situational and social factors (e.g., homelessness).(15, 16, 17) However, Ghodse et. al. doubt the positive effect of an increased availability of syringes on needle sharing, "[b]ecause sharing of syringes is associated with a feeling of community among drug users and not only with a shortage of needles."(18) This statement is, however, not based on their findings, but references a letter to the editor of the New England Journal of Medicine by the American researchers Black et al.

In their report on a study at the Dallas Veterans Administration Hospital Black et al. also question the effectivity of increased syringe availability without educational interventions, "since needle sharing has been found to be associated with socialization, communal feelings, and protection in the drug subculture, not merely with shortages of needles." (19) Again, this is not an empirical finding of the research reported, but a reference to a 1970 study by Howard and Borges(20) (in the letter the two references are mixed up).

Likewise, Newmeyer et al. refer to "the ritual of needle sharing"(21) and Newmeyer writes "[E]ven if rigs are abundant, there remain social and psychological reasons for sharing (for example, the expression of interpersonal trust or bonding)."(22) The authors, however, fail to explain what they mean by ritual and do not support their statements with empirical evidence or references.

Smith claims that "needle sharing is an integral part of the drug taking ritual" and that "sterile needles will not eliminate that ritual, but it will reduce some of the associated medical risk."(23) However, just as the preceding publications, this article does not present empirical data to support this statement. Smith also doubts the effectivity of needle distribution:

The assumption that distribution of free needles will change the ritual and that each individual will use their own outfit except when they are really high or junk sick is questionable at best, because addiction is characterized by a compulsion to use, the loss of control and continued use in spite of adverse consequences.

This article is confusing and inaccurate in several aspects. The supposed awareness of street addicts "of the risk of AIDS associated with needle sharing" is supported with a reference to the Howard and Borges article (20), published in 1970, well before the onset of the AIDS epidemic in the USA. A clear mistake. The above mentioned Black et al. study is extensively cited. Smith uses the same quote on symbolic meanings of needle sharing as Ghodse (which as already demonstrated, is based on the Howard and Borges article). Some percentages of the Black et al. study are presented, but two of the cited percentages on needle sharing do not match the original report in the New England Journal of Medicine. Furthermore the impression is created as if two distinctive studies are cited, because not only the original study is

mentioned, but also a review of this study, without connecting the two.(24) For a large part these mistakes and inaccuracies may be the result of the author's casual reading.

But after reviewing both sources carefully one cannot but conclude that Smith's writing displays carelessness of plagiaristic proportions. Many sentences have the (almost) exact wording of the review without quotation marks, one time referencing the original paper, the other the review. This also explains the mistakes to a great degree. The sentences that give the (wrong) percentages on needle sharing are exact copies of the review, but reference the original report. One of these percentages is a copy of a mistake of the reviewer, in the other the integers are transposed. The inaccurate AIDS awareness reference to the Howard and Borges article is also a copy of a mistake of the reviewer. Likewise, the quote on the symbolic meanings of needle sharing also leans heavily on the wording of the review. Surely in these last two instances the author should have known better, as in 1972 he himself edited a book in which the Howard and Borges article was reprinted.(25) Three of the discussed articles refer to the Howard and Borges article.(20) This article is one of the very few empirical studies into the ritual aspects of needle sharing. It discusses the results of fifty interviews held in the Haight-Ashbury district of San Francisco in 1968. The article is frequently cited in contemporary publications on the relationship between needle sharing and HIV transmission. Therefore it was reviewed with extra attention. According to the methods section, the study subjects were non- randomly selected based on appearance and interviewed by a student interviewer.

People that denied injecting drug use and, with a few exceptions, IDUs who denied needle sharing were excluded from the sample. Females were deliberately oversampled. Of a subsample of 36 (18m, 18f), 11 subjects (8 f, 3m) had injected drugs less than ten times altogether. The median ages were 20.5 for males and one and a half years younger for females. The overwhelming majority of subjects had life time experience with narcotics, sedative hypnotics, amphetamines, LSD and other synthetic or botanical hallucinogens, cannabis and other psychoactive preparations, either orally (swallowing or smoking) or parenterally.

The study showed that almost all subjects were aware of the negative consequences of needle sharing and they tried to counter these by a variety of measures and

techniques. Pragmatic considerations were found to be the dominant incentives for sharing needles: The shortage of needles and syringes was most often mentioned as reason for needle sharing, followed by fear of arrest and economic incentives --"it saves the cost of outfits and because sharing can be tantamount to sharing drugs" (one has the dope, the other the works).(20) Sharing was found to be part a more general pattern, as food, lodging and drugs were frequently shared. Subjects said they generally shared needles at home or at a friends residence, with friends or intimates, rarely with strangers.

Females shared needles more often than males. 65% of the women had never shot alone compared to 25% of the men. 56% of women compared to 17% of the men always shared needles. 68% of the males compared to 29% of the females had at one time or another injected themselves. These differences are explained in terms of socialization into injecting drug use and traditional sex role differentiation. Traditional sex roles can thus be seen to restrict women's availability of both drugs and works, as one of the female subjects expressed, "My husband would not get me a new point. The only way I can get the dope is by sharing with him."

Only after being prompted, 20% of the sample mentioned "a feeling of closeness" in sharing. However, when discussing group shooting in general 20% spontaneously mentioned the importance of relating to others and feeling a sense of community, while 32% emphasized communicational aspects and the sharing of experiences. When discussing "means of protection" the distinction between needle sharing and group shooting was blurred by the respondents, but 18% of the sample mentioned feelings of security and protection provided by the group. The authors argue that "sharing needles leads to a greater protection than shooting in a group with one's own fit, because sharing conveys a greater sense of identification, bondage, and responsibility." This argument is, however, not really supported by their data or by preferences. Moreover, the argument that needle sharing leads to shooting the same amount of the drug, which is perceived safer by the authors, is inaccurate for two reasons. First, shooting the same amount is not very likely as the injected dose highly depends on individual tolerance levels. In particular in mixed groups of experienced and unexperienced users or in initiations such a practice may even be dangerous. And second, titration of individual doses does not require needle sharing.

The article also discusses status achievement and the findings indicate that status is allocated with drug tolerance, needle tracks and injecting skills, and the willingness to share drugs. Ensuing, the sexual connotation of sharing needles is addressed and the authors suggest sexual overtones to needle usage. Finally, the authors discuss self-destructive and masochistic aspects of injecting drug use. They speculate that such tendencies may help explain endured needle sharing in spite of knowledge of the negative consequences. However, the results presented on the last three items (status achievement, sexual connotations and self-destructive/masochistic refer to needle usage and not to needle sharing and can therefore hardly be used in explaining the latter.

This article provides a unique view of the social setting of injecting drug use in a group of San Franciscan hippies. But its results are not definitive, as it has some important limitations. In particular the findings on the often cited "community feelings," "security/protection" and "socialization" must be considered with considerable caution. It is rather ambiguous if the presented data on these items exclusively refers to needle sharing or to group injecting in general. Not only the subjects seemed to mix them up, but data on group drug use are used to support statements on needle sharing. Therefore, the presented results do not convincingly show that needle sharing is a self-perpetuating ritual in the study sample. As the article indicates, needle sharing often appeared in the context of drug sharing, which, as chapter nine demonstrated, is an important part of group drug taking and often does have symbolic functions. The quote of one female subject, "In some circles there's a social stigma if you don't share," may well address the wider practice of drug sharing.

A second, and more important, shortcoming is the generalizability of the results. As the authors suggest, it is indeed important to know how (a)typical their sample is for other IDU populations. In the present decade, the second in the AIDS-era, this question is more opportune than ever. The second half of the 1960s was an atypical and turbulent time. The hippie subculture, the Vietnam war and the anti-war movement, the sexual revolution and upcoming drug use among white (middle class) youth all fused in a juncture of which the main, and lasting, characteristics were the emancipation of youth and the diffusion of drug use into large segments of most Western nations. Since then, things have changed rather drastically. For the AIDS

generation the day-to-day worries of the love generation have lost most of their validity. Make love not war has been replaced by a more sabre-rattling slogan: War on Drugs. In the western hemisphere drug use has become a stable phenomenon, while in many drug producing countries and the former socialist countries drug use is booming as new consumer markets develop. (26, 27, 28) More than half of the sample in the Howard and Borges study never self-injected drugs.(i) Combined with their drug use characteristics, this strongly suggests that many of this study's subjects were in a beginning, experimental phase of their drug use careers. Moreover, their sociodemographic characteristics only minimally match those found among current IDU populations.(7, 15, 29, 30, 31) Finally, the specific ideology and spirit of the times of the late 1960s may have influenced the self-images and assessment of drug use variables by the research subjects. As the authors write in their conclusion, "the relative importance of the various possibilities involved in sharing is yet to be determined."

Des Jarlais and his colleagues reported on needle sharing in the social setting of the pre-AIDS drug subculture in New York City. Their well documented descriptions of the social context of needle sharing emphasize the subcultural context of injecting drug use. They describe a highly repressed social structure around the procurement and use of drugs in which "interpersonal trust is in precarious balance with a generalized mistrust."(32) This deviant subculture shares values, rules and language, and functions as a communication network spreading oral information about drug availability, police actions and other valuable information.(33) In general, their findings match the results presented in chapter nine, although the level of repression, due to the ongoing drugs war, seems to result in more extreme situations and behaviors. They found that in the pre-AIDS period, needle sharing was usually associated with initiation into use--the person to be inducted normally did not carry a syringe--, the use of shooting galleries, and practical utility and social bonding between running partners.(32) In particular "the sharing of needles within such running partner relations symbolizes a social bonding that makes it very difficult for one or more group members to use only his or her own set of works ..." (34) Regarding pre-AIDS needle sharing Des Jarlais et al. write:

Prior to concern about AIDS, the sharing of drug injection equipment was normal behavior among IV drug users. There were multiple reasons for sharing, from the social norms within the small friendship groups to greater availability of used equipment when a person had drugs to inject. While there was some concern about hepatitis, there were no overriding reasons not to share drug injection equipment.(33)

Finally one recent report from Canada claimed that needle exchange and similar strategies "would be generally ineffective, because [among other reasons] sharing needles communally [w]as part of the sexual ritual of fixing."(35) Data to substantiate this bold statement was, however, not presented.

Based on this literature review it is clear that scientific support for the thesis that ritual is a self-perpetuating ritual is scanty. None of the discussed studies utilized explicit definitions of ritual. All but two studies fail to support statements regarding the alleged symbolic properties of needle sharing with empirical data. Some authors just present the argument without reference. In other papers references are mixed up or inappropriate. A questionable practice of chain-referencing has been found, leading back to the in 1970 published study of Howard and Borges. Reading the original study makes it clear that many of those referencing it failed to do so. The findings of this study must, however, be interpreted with reticence. Moreover, both this study and those of Des Jarlais and colleagues on the ritual and symbolic aspects of needle sharing reflect drug use situations (long) before the onset of AIDS. It can thus be concluded that the studied literature does not give a decisive answer to the question whether contemporary needle sharing is a ritualized part of drug using behavior and if so, under what conditions such rituals develop.

Needle Sharing and Conditions for Ritualization

The reviewed literature offers thus little empirical evidence to support the idea of a needle sharing ritual, independent of other social, psychological, cultural and economic influences. But, as the extensive literature review on the concept of ritual (chapter two) suggested, in essence all behavior may be subject to ritualization processes. From that perspective needle sharing is not an exception. In order to determine the ritual dimensions of needle sharing, it must be examined in light of the

relevant definitions of ritual and ritual objects. In particular, the conditions regarding injecting equipment and those regarding illegal drug use in general must be considered. In short, these definitions state the following requirements: For an event to be a ritual event it must follow a prescribed sequence of psychomotor acts which has special meaning for the performer.(36) The condition of special meaning has a double meaning, referring to instrumental and symbolic goals. The ritual value of an object--its capacity for ritualization--is determined by the subjective importance it has gained due to its scarcity.(37, 38, 39) Through a low availability, objectively important objects are transformed into subjectively important objects. This may lead to the appendage of symbolic elaboration (social importance) to the object, increasing the ritual value. (For a detailed discussion see chapter two).

Needle sharing Compared with Drug Sharing--Different Objects, Different Statuses

As has been demonstrated in chapters nine and eleven, drugs were often shared among the research subjects and, in general, these sharing events fulfilled the definitional requirements of ritual interaction. Not only standardized interaction sequences were observed in these drug sharing events, but these interactions served both instrumental and symbolic purposes. In contrast, needle sharing as a planned or stereotypical sequence in which two or more people share a syringe was not ever observed. A typical pattern of needle sharing was non-existent. The recorded cases of needle sharing could not be interpreted in terms of ritual interaction and were mainly determined by situational variables (see chapter twelve). This difference is explained by the disparate statuses of the two objects in regards to the definitional requirements of ritual and ritual objects. Drugs, such as heroin and cocaine, not only have a recognized objective importance among their users, but due to prohibition and the resulting exorbitant black market prices they have become scarce objects. Therefore, they gained substantial subjective importance and have become the instrumental imperative for the formation of a drug-centered community.(40) Not surprisingly, drugs are the most important incentive for, and subject of, interaction in this community. Sharing drugs has both short term and long term instrumental advantages. It prevents instances of intensive withdrawal experiences, as there is normally a fellow user willing to help with a *betermakertje*. This has created a network of mutual obligations which surpass debts between individual users. Drug sharing is also inundated with symbolic meaning. Sharing

drugs facilitates contact and communication, smoothes conflict and reinforces enduring relationships among individuals of equal (deviant) status. Strict norms have developed around the sharing of drugs. Drug sharing sanctions the integration into normatively regulated social behavior of the activities which the users' desire for drugs urge them to perform.(41) Ultimately, drug sharing is aimed at maintaining the subculture. In contrast, needles have never been restricted in the Netherlands and due to the exchange programs, sterile injection equipment can normally be easily obtained. Although needles hold a recognized objective value in the IDU subculture, the easy availability of new needles precludes the regular sharing of used ones. Because needle sharing is not a regular event, there is no room for the development of stylized, stereotypical behavioral sequences. The absence of scarcity likewise prevents the development of subjective importance and the addition of community values.

The Netherlands v.s. the USA--Different Drug Policy Contexts, Different Outcomes

In the United States drug sharing has also been documented, representing similar community values.(14, 33 36, 42, 43) The legal status of heroin and cocaine is not essentially different in the USA and the Netherlands--in both countries these drugs are illicit. However, the enforcement policies can be seen to diverge substantially. While the Dutch approach has resulted in rather stable and less violent drug subcultures, the work of Des Jarlais et al. and other research groups indicate that in America the subcultures surrounding these drugs are volatile and violent.(32) Generalized feelings of mistrust, though not completely absent among Dutch users, seem more normative among American users. The, compared to the Dutch situation, lower and less stable drug availability has not only induced a more elaborated monetarization of mutual services (for example commercially exploited shooting galleries, needle rental and paid house doctors) (32, 44, 45), but sharing behaviors, symbolized by the sharing of drugs, seem less consistent and limited to smaller groups or networks around the individuals, exemplified by the dyadic relationship of running partners.(14, 46) When sharing is limited to only the most significant other(s), the event increasingly becomes distinguishing and revered, thereby increasing the binding force of the ritual.

In contrast with that of drugs, the legal status of injection equipment in the USA and the Netherlands is significantly different. In the Netherlands injection equipment has

never been scheduled, while in most states of the USA they are. After the development of the Model Drug Paraphernalia Act by the Drug Enforcement Administration in 1979, thirty-eight states and the District of Columbia have passed laws based on the model act, while an additional nine states have passed similar laws. With a broad range of other drug paraphernalia, these laws prohibit the distribution and possession of drug injection equipment. The Federal Mail Order Drug Paraphernalia Control Act, enacted in 1986, criminalized the interstate transport of these objects.(47) These laws did not criminalize up to then unscheduled objects, but merely streamlined the existing legislation. It is therefore not surprising that the little empirical evidence for ritualization or symbolic elaboration around needle sharing comes from the USA comes, to be concise, from New York City and San Francisco. Both cities are located in states with legal restrictions on the availability and possession of hypodermic syringes and needles.

These legal restrictions have limited the overall availability of injection equipment significantly, while fear of arrest on possession charges often discourages IDUs to carry their personal set which further reduces their on-the-spot availability. The low availability has turned needles into scarce commodities in the American drug subculture. This structural scarcity increased their (subcultural) economic value and inspired several expressions of monetarization around the provision of needles.

Hopkins documented a structural black market in needles.(48)(ii) In addition to new needles, needle sellers not infrequently sold resealed used needles as new. Such profiteering may put IDUs unknowingly at risk for HIV infection. Used needles are often anonymously used at commercial shooting galleries, which are documented sources of HIV spread.(3, 49) In a shooting gallery individuals pay an entrance fee and rent a (mostly used) needle. Both needle selling and running a shooting gallery are motivated by economic incentives. For a considerable number of users these activities are an important source of income.(iii)

Nevertheless, the low needle availability has created a situation in which ritualization processes around needle sharing could develop. But renting a needle at a commercial shooting gallery cannot be interpreted in terms of ritual. Galleries mostly serve transient populations and proprietor and visitor have a foremostly (short lasting) monetary relationship. Use of shooting galleries is primarily determined by pragmatic factors and the use of these venues has been associated with homelessness, lack of

financial resources and the absence of (friends that could supply) a place to get off.(16, 45) In general, interactions in such places do not meet the definitional requirements for ritual interaction.

As Turner pointed out, the closer the bond outside the potential, ritualized situation, the more meaning the ritual act will have.(50) Thus, ritualized needle sharing is more expected among IDUs with multiplex relationships--(sexual) partners, friends and other close relationships. Although, the preceding literature review produced little empirical evidence to substantiate this expectation, the finding that the majority of IDUs generally only shares with people they know well (19), is perhaps an indication of social ritualization processes. On the other hand, this selectivity is probably better explained as a rational attempt to assess HIV infection risks, given the available information. Sharing in tight friendship groups is generally perceived as a lower risk than sharing with strangers, by both users(51) and researchers (19), and there is some evidence to support this idea.(9) But this protection is of course limited. It only gives protection as long as the virus has not been introduced in the group among which injection paraphernalia are shared. When introduced, it may, by the same token, spread very rapidly. That may well have been the case in the group of early seroconverters in Scotland, reported on by Robertson et al., who, "due to a failure of the supply of clean equipment, formed an intimate equipment sharing community".(52)

Murphy suggested that in couples, needle sharing may substitute feelings of sexual intimacy and represent an intimate part of their relationship. Just as in the Howard and Borges study, some of her female subjects were dependent on their male partners to inject the drug for them.(53) In such cases needle sharing is part of the couples shared use of drugs, whereby the male exercises authority over the female by controlling her access to drugs, works, and her veins. Needle sharing has frequently been related to initiation into injecting drug use.(20, 32) First injection of an illicit drug is seldom a planned event and the novice does not carry a syringe around. If this event is subject to ritualization, it is not so much the sharing of injection equipment (on such occasions drugs are mostly also shared) which is the object of the ritual process, but the event itself. The event signifies the transition of non-user or, more specific, non-IDU, to the newly acquired status of IDU. In such cases needle sharing is merely part of this rite of passage.(54) The most pronounced indications of

ritualization processes around needle sharing were found among dyads.(32) But, here again it is not an isolated phenomenon, but part of a larger sharing pattern, which is the cement of a highly entrained relationship.(55)

Primary vs. Secondary Ritual Value

A factor that may limit ritualization of needle sharing is the indirect relationship between the goal (the drug high) and the means (the needle). Drug use facilitates interaction and when drugs are shared they induce feelings of solidarity and produce a common mood. These are intrinsic features of ritual and a main reason for drug use.(55) Use of drugs (irrespective of their legal status and resulting availability) is thus directly associated with positively valued altered states of consciousness. Chapters two and nine contended that the intensity of ritualization is subject to factors that influence availability. For example, draughts and the absence of reliable water distribution systems limit the availability of water and thereby have an impact on the ritualization of this necessity of life among certain tribal peoples. Likewise, prohibition and the uncertainties of the resulting underground or subcultural drug distribution system limit the availability of drugs, contributing to the level of ritualization of drug use. However, with or without these deterrents, drugs are, and throughout history have been, used for ritual purposes. Their use is inherent to human (and animal) nature.(56) Therefore, it was argued in chapter nine that drugs have intrinsic or primary ritual value. In contrast, the ritual value of syringes and other drug paraphernalia is merely derived from their association with the drugs. Hence, needles and syringes can only obtain secondary ritual value. To make a bold comparison, in the Sahara people ritualize water, not the bucket (but they might if these should become scarce).

Ritualization is a Dynamic Process

It must be understood that ritual is not a static condition, but a dynamic process. The significance or coercive power of ritual--the power performers ascribe to, and feel forced upon themselves by the performance of ritual--can be seen to vary with the intensity of ritualization. This intensity may vary with several factors. Social factors define the situation in which the ritual interaction is performed. As Goffman explained, different faces, statuses and relationships delimit what is appropriate behavior in a situation.(57) Ritual is furthermore embedded in, and an expression of a wider set of cultural values, which also determine the pertinence of behavior. Personal factors

(perceived availability, religion, etc.) may account for variations in perception, interpretation and evaluation of what is and is not (part of the) ritual or what the meaning (ranging from purely instrumental to highly symbolic) is of certain acts.(36) The symbolism of blood brothers, reported by some subjects in the Howard and Borges study, can therefore best be interpreted as personal expressions of symbolism of experimental drug users. As Cleckner writes, "The symbolic content of shared customs is not regarded as terribly significant. What is significant is the concrete results of effects of any action, not its reality status. The actual texture of street activity is dealing with reality as it is. Street customs are predominantly pragmatic and rational with little room for symbolic elaboration. A dope fiend can almost always give a practical explanation for anything he does."(58) Most committed IDUs are thus too busy taking care of business for such conscious symbolic elaboration of their daily activities.(46) On a conscious level, their activities are generally driven by pragmatic, especially economic considerations--related to the object that largely determines their daily life.

Adaptation to the Changing Functionality of Needle Sharing

Pragmatism is an essential feature of the lives of IDUs. Maintaining regular injecting drug use requires considerable coping skills and the flexibility to adapt to obstacles that (potentially) interfere with drug use management. From this functionalistic perspective needle sharing is simply a rational adaptation to the legal restrictions on injection equipment. Under these conditions, needle sharing has become the rule. Although sharing has always been associated with diseases as hepatitis, abscesses and endocarditis, these were only part of the many hazards IDUs had to cope with, and, not unjustly, many others were experienced as far more threatening. From the perspective of the IDU, the cost benefit analysis of needle sharing has thus always been in favor of this behavior. Until the advent of the HIV epidemic. HIV has tipped the balance towards the negative. IDUs are increasingly aware of the threats HIV poses on them and they are looking for ways to protect themselves, partners, family and friends. Being denied access to services which may support such changes in many countries, in particular in the USA, this is not an easy task. However, a large number of recent studies established that under the influence of the AIDS threat all over the world IDUs are adopting less risky injecting practices(59, 60), even in the American epicenters of AIDS.(61, 62) New needles are in great demand(48) and

when shared, used ones are often cleaned with bleach.(21) This underlines the instrumental imperative of needle sharing. In the AIDS era, the functionality of needle sharing is challenged by the information on the threats it poses on the user and her/his relationships--it has gradually become dysfunctional. But due to HIV's long incubation period, the consequences of needle sharing have been underplayed, obscured and denied for a long time. For many IDUs HIV was only an intangible remote threat, which could simply not compete with more immediate needs and threats. As Stern made painfully clear, "AIDS is just not the biggest problem on the block."(63) Reduction of personal risk behaviors can only be maintained if these are supported by cultural change, and this is a slow process, hampered by prohibition of drugs and injection paraphernalia. As it is much harder to break the rule of sharing with close relationships than with strangers and loose acquaintances(32, 64, 65), one may expect that the process of change started with the latter and will end with intimates, presumably before the sharing of other body fluids is terminated.

Who propagates the needle sharing ritual?

Conducting the literature review it became apparent that several authors put ritual or symbolic aspects of needle sharing forward to support their doubts about the effectivity of needle exchange. In particular Smith went far beyond what is scientifically acceptable. Elsewhere he made an even more unrealistic claim. In his opinion, needle exchange programs would not have an effect on the spread of HIV through needle sharing, because such practices are simply part of the drug culture. He furthermore alleged that if ten addicts in a room had their own needles, they would all use the same one and simply pass it around.(66) Apparently, this quixotic depiction appeals to the public's imagination as some years later it was recorded in an interview with a top rank law enforcement officer in New York City:

You are dealing with an addict who is at best very, very unreliable. He does not bathe, he does not wash, he wakes up every morning with the purpose of kicking the drug habit and at the same time he is going to get some drugs. ... By nature drug addicts, street people, they share things. They share their beds, their bottles, they share their women: they share their needles. ... Drug users lie, steal, cheat. That is the

make-up of a drug addict. ... They have always shared needles, that is their nature, that is their make-up, they share things. What is the reason for it? I don't know, but that is their nature. ... We have seen cases where addicts were in a room and had needles, that were stolen from a hospital or a pharmacy, in its package, sterile, all on the floor and they were sitting around sharing one, probably contaminated, needle among each other.(67)

These portrayals are false for at least two reasons. As was explained above, needles are solely instrumental in the act of getting high and sharp new ones fulfill this function of getting the drugs into ones system best. For what reason would an IDU-- who is eager to get off--wait for nine others to finish using the same dull needle (which can take a while), while sharp new ones are available? With all respect, such simplistic analyses may be expected from an ill-informed and frightened lay audience, but not from professionals. As Fiddle pointed out, those working in the area of drug law enforcement ordinarily see drug users at their worst.(68) Likewise, Smith is a clinician and his view may be biased by overexposure to poorly coping clinical populations, but as he also is involved in research, some reservations in his statements would be appropriate.

However, such narrow and ungrounded analyses are not limited to clinicians and law enforcement officials. On the contrary, the mythical needle sharing ritual is frequently used to block harm reduction approaches against the spread of HIV in this population. In particular, the American administration has consistently been using this bogus argument in opposing needle exchange programs and defending restrictive needle legislation. For example, Herbert Kleber, former deputy director for demand reduction of the Office of National Drug Control Policy (the pentagon of the war on drugs), recently published an editorial in which he reflected on the issue of needle exchange. Among several other ungrounded statements, and without any references, he claimed that "many addicts would continue to share even if clean needles were available; it has become part of the ritual of taking drugs that accompanies an illicit and socially condemned activity."(69) Likewise, Charles Schuster, former director of NIDA, affirmed that "[a]lmost all intravenous drug users sometimes share their works, for reasons that include convenience, friendship and ritual." He wrote this in the

foreword of the recent NIDA Research Monograph on needle sharing, which determined that the reality of needle sharing situations is far more intricate than suggested.(70)

Conclusions

The literature review raised no conclusive empirical evidence to support the notion that needle sharing among IDUs is a stable ritual, independent of other factors. The two empirical studies that suggest symbolic functions of this behavior were conducted before awareness of the HIV-epidemic came about and therefore generalization from pre-AIDS to current populations of IDUs may be invalid. The other articles add little relevant information, and some of these even spread misinformation about the discussed phenomenon. Perhaps the only definite evidence of ritual the review brought up, reflects on the scientific culture itself, as a questionable example of ritual referencing was established.

By comparing the conditions of drug and needle use with the relevant definitions of ritual event and ritual objects it was demonstrated that the attachment of symbolic elaboration to the use of such objects is principally subject to their perceived availability. This explained the ritualization of drug use found in this Dutch research and in American studies. In both countries, decreased drug availability has created a situation in which the attachment of symbolic meaning to primarily instrumental acts became possible. The different levels of ritualization and monetarization around drug use activities between the two countries can be attributed to gradual differences in drug availability due to different enforcement policies. The same factors explained the absence of a pattern of ritualized needle sharing in the Netherlands and the assumed presence of needle sharing rituals in the USA, prior to AIDS awareness. While the easy availability in the Netherlands prevented this process, the restrictions on sale and possession in the USA made the addition of symbolism to the primarily instrumental act of sharing needles possible. As Carballo and Rezza write in their discussion of factors that may restrain the perceived availability of needles and syringes:

Placed in th[e] broader social framework in which drug injecting has been stigmatized, actively prosecuted and associated with a range of

other social problems, the sharing of needles and syringes may have gone on to represent, for some individuals, a symbol of group cohesiveness and solidarity and may have enhanced the process as well as the experience of drug injecting.(71)

However, even in the USA there is no substantial evidence in support of ritual needle sharing practices, despite these favorable conditions. The assumption that IDUs will not change or reduce their needle sharing practices in response to an increased availability, because it is a ritualized behavior pattern cannot be supported by scientific data.

This myth is further falsified by a growing number of scientific publications that show significant behavior modification towards safer injecting practices, in particular in places where needles and syringes are sufficiently available. These studies show furthermore that needle sharing is essentially adaptive behavior, induced by unavailability and unfavorable socio-economic conditions. The same conclusions are reached on the basis of the current analysis of determinants of ritualization. That is, through input of AIDS information and experience, the instrumental imperative of needle sharing is becoming increasingly overruled by the potential negative consequences for the individual, his network and the subculture as a whole.

Knowledge of the current risks of needle sharing is, nevertheless, not a guarantee for (the maintenance of) safe injection behavior. Sufficient availability of syringes and needles does prevent the development of stereotypical needle sharing patterns. Moreover, it limits the number of situations in which needle sharing may, besides abstaining from or postponing a drug injection, become the only choice. But, just as the availability of condoms will not entirely stop unprotected sex, it cannot reasonably be expected that easy access to needles will eliminate all unsafe injecting. After all, injecting drug use remains a highly criminalized, but (for the performers) imperative activity.

The idea of ritualized needle sharing and other stereotypical portrayals of drug users are actively propagated by the highest rank executives in the hierarchy of the War on Drugs. Presented as scientific facts, they essentially are deceptive political soundbites--the argot of the war on drugs rhetoric. These political opportunistic myths fuel addictophobia and obstruct a rational assessment of the drug problem, blocking

alternative (and more efficient) approaches to stop the spread of AIDS among injecting drug users and their relationships. Ultimately, they obstruct peace in the civil war on drug users.

References

1. Brettle RP: Epidemic of AIDS related virus infection among intravenous drug abusers. *BMJ* 1986; 292: 1671.
2. Chaisson RE, Moss AR, Onishi R, Osmond D, Carlson JR: Human immunodeficiency virus infection in heterosexual intravenous drug users in San Francisco. *Am J Public Health* 1987; 77: 169-172.
3. Marmor M, Des Jarlais DC, Cohen H, et al.: Risk factors for infection with human immunodeficiency virus among intravenous drug abusers in New York city. *AIDS* 1987; 1: 39-44.
4. Hoek JAR van den, Coutinho RA, Haastrecht HJA van, Zadelhoff AW van, Goudsmit J: Prevalence and risk factors of HIV infections among drug users and drug using prostitutes in Amsterdam. *AIDS* 1988; 2: 55-60.
5. Moss AR: AIDS and intravenous drug use: the real heterosexual epidemic. *BMJ* 1987; 294: 389- 390.
6. Tempesta E, Di Giannantonio M: Sharing needles and the spread of HIV in Italy's addict population. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 100-113.
7. Sasse H, Salmaso S, Conti S, Rezza G, & the first multicentre study group: Sexual lifestyles in injecting drug users in Italy: Potential for HIV infection transmission. *British Journal of Addiction* 1991; 86: 1083-1089.
8. Tempesta E, Di Giannantonio M: The Italian epidemic: a case study. In: Strang J, Stimson G: *AIDS and Drug Misuse*. London and New York: Routledge, 1990: 108-17.
9. Rezza G, Fausto T, Tempesta E, Di Giannantonio M, Weisert A, Rossi GB, Verani P: Needle sharing and other behaviours related to HIV spread among intravenous drug users. *AIDS* 1989; 3: 247-248.
10. Stern LS: Personal communication, 1992.
11. Grund JPC: Personal observation.
12. Harding G: Pharmacists' role in HIV transmission reduction and their attitudes to injecting drug misusers (IDMs). Paper presented at the 2nd International Conference on the Reduction of Drug Related Harm. March 2-6, 1991, Barcelona, Spain.
13. Power RM: The influence of AIDS upon patterns of intravenous Use- Syringe and Needle Sharing- among illicit drug users in Britain. In: Battjes RJ, Pickins RW (eds): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 75-88.
14. Feldman HW, Biernacki P: The ethnography of needle sharing among intravenous drug users and implications for public policies and intervention strategies. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 28-39.
15. Stimson GV, Alldritt LJ, Dolan KA, Donaghoe MC, Lart RA: *Injecting equipment exchange schemes: final report*. London: Monitoring Research Group, 1988.

16. Donaghoe MC, Dolan KA, Stimson GV: Life style factors and social circumstances of syringe sharing in injecting drug users. London: Centre for Research on Drugs and Health Behaviour, 1991.
17. Burt J, Stimson GV: Report of in-depth survey of intravenous drug use in Brighton. London: Monitoring Research Group, 1988.
18. Ghodse AH, Tregenza G, Li M: Effect of fear of AIDS on sharing of injection equipment among drug abusers. *BMJ*, 1987; 295: 698-699.
19. Black JL, Dolan MP, De Ford HA, Rubenstein JA, Penk WE, Robinowitz R, Skinner JR: Sharing of needles among users of intravenous drugs. *New England Journal of Medicine* 1986; 314: 446-447.
20. Howard J, Borges P: Needle sharing in the Haight: Some social and psychological functions. *J Health Soc Behav* 1970; 11(3): 220-230.
21. Newmeyer JA, Feldman HW, Biernacki P, Watters JK: Preventing AIDS contagion among intravenous drug users. *Medical Anthropology* 1989; 10: 167-175.
22. Newmeyer JA: Why bleach? Development of a strategy to combat HIV contagion among San Francisco intravenous drug users. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 151-159.
23. Smith DE: The role of substance abuse professionals in the AIDS epidemic. *Advances in Alcohol and Substance Abuse* 1987; 7(2):175-195.
24. New Study unveils sharing practices, AIDS and IV needle sharing. *Street Pharmacologist* 1986; 9(4): 1.
25. Howard J and Borges P: Needle sharing in the Haight: Some social and psychological functions. In: Smith DE and Gay GR (eds.): *"It's So Good, Don't Even Try It Once": Heroin in Perspective*. Englewood Cliffs, New Jersey: Prentice-Hall, 1972: 125-136.
26. Choopanya K, Vanichseni S, Des Jarlais DC, Plangsringarm K, Sonchai W, Carballo M, Friedmann P, Friedman SR: Risk factors and HIV seropositivity among injecting drug users in Bangkok. *AIDS* 1991; 5: 1509-1513.
27. Naik TN, Sarkar S, Singh HL, et al.: Intravenous drug users --a new high-risk group for HIV infection in India. *AIDS* 1991; 5: 117-118.
28. Tobolska-Rydz H: Problems of drug abuse and preventive measures in Poland. *Bulletin of Narcotics* 1986; 38: 99-104.
29. McCusker J, Koblin B, Lewis BF, Sullivan J: Demographic characteristics, risk behaviors, and HIV seroprevalence among intravenous drug users by site of contact: Results from a community-wide HIV surveillance project. *Am J Public Health* 1990; 80(9): 1062-1067.
30. Toet J: Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
31. Grapendaal M, Leuw E, Nelen JM: De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan. Arnhem: Gouda Quint, 1991.
32. Des Jarlais DC, Friedman SR, Strug D: AIDS and needle sharing within the IV-drug use subculture. In: Feldman DA, Johnson TM (eds.): *The social dimensions of AIDS*. New York: Praeger Publishers, 1986: 111-125.
33. Des Jarlais DC, Friedman SR, Sotheran JL, Stoneburger R: The sharing of drug injection equipment and the AIDS epidemic in New York City: The first decade. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 160-75.
34. Des Jarlais DC, Friedman SR, Casriel C, Kott A: AIDS and preventing initiation into intravenous drug use. *Psychology and Health* 1987; 1: 179-194.

35. Pagliaro AM, Pagliaro LA, Thauberger PC, Hewitt DS, Reddon JR: Knowledge, behaviours, and self-perception of risk in relation to HIV infection and AIDS: Indigenous peoples studies. Presented at the "Healing our spirit worldwide" conference, Edmonton, Alberta, Canada, 1992.
36. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 137- 148.
37. Harrison JE: *Ancient art and ritual*. New York: Oxford University press, 1951.
38. Radcliffe-Brown AR: *The Andaman Islanders*. Glencoe Ill.: The free press of Glencoe, 1948.
39. Malinowski B: *Sex, culture and myth*. New York: Harcourt, 1962.
40. Malinowski B: *A scientific theory of culture and other essays*. New York: Oxford University Press, 1960.
41. Malinowski B: *A scientific theory of culture and other essays*. New York: Oxford University Press, 1960.
42. Sandoval MC: Patterns of drug abuse among the Spanish-speaking gay bar crowd. In: Du Toit BM (Ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 169-187.
43. Mata AG, Jorquez JS: Mexican-American intravenous drug users' needle-sharing practices: Implications for AIDS prevention In: Battjes RJ, Pickins RW (Eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 40-58.
44. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. *Am J Public Health* 1990; 80: 150-152.
45. Murphy S, Waldorf D: Kickin' down to the street doc: Shooting galleries in the San Francisco Bay Area. *Contemporary Drug Problems* 1991; 18(1): 9-29.
46. Preble E, Casey JJ: Taking care of business - the heroin user's life on the street. *Int J Addict* 1969; 1: 1-24.
47. Pascal CB: Intravenous drug abuse and AIDS transmission: Federal and state laws regulating needle availability. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 119-136.
48. Hopkins W: Needle sharing and street behavior in response to AIDS in New York City. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 18-27.
49. Schoenbaum EE, Hartel D, Selwyn P, Klein RS, Davenny K, Rogers M, Feiner C, Friedland G: Risk factors for human immunodeficiency virus infection in intravenous drug users. *New England Journal of Medicine* 1989; 321(13): 874-879.
50. Turner VW: *Dramas, fields and metaphors*. London: Cornell University Press, 1974.
51. Burt J, Stimson GV: *Strategies for protection*. London: Health Education Authority, 1990.
52. Robertson JR, Bucknall ABV, Welsby PD, Roberts JJK, Inglis JM, Peutherer JF, Brettle RP: Epidemic of AIDS related Virus (HTLV-III/LAV) infection among intravenous drug abusers. *BMJ* 1986; 292: 527-529.
53. Murphy S: Intravenous drug use and AIDS: notes on the social economy of needle sharing. *Contemporary Drug Problems* 1987; 14: 373-395.
54. Gennep A van: *The rites of passage*. London: Routledge and Kegan Paul LTD, 1960.
55. Collins R: Towards a neo-Meadian sociology of mind. *Symbolic Interaction* 1989; 12(1): 1-32.

56. Siegel RK: Intoxication: life in pursuit of artificial paradise. New York: Pocket books, 990.
57. Goffman E: Interaction ritual: Essays on face to face behavior. New York, Pantheon Books, 1967.
58. Cleckner PJ: Cognitive and ritual aspects of drug use among young black urban males. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 149-168.
59. Becker MH, Joseph JG: AIDS and behavioral change to reduce risk: A review. American Journal of Public Health 1988; 78: 394-410.
60. Friedman SR, Des Jarlais DC: HIV among drug injectors: The Epidemic and the response. AIDS Care 1991; 3: 239-250.
61. Guydish J, Abramowitz A, Woods W, Newmeyer J: Sharing needles: Risk reduction among IVDU's in San Francisco. Presented at the V World AIDS Conference, Montreal, Canada 1989. Abstract no. THDP 34.
62. Des Jarlais DC, Tross S, Abdul Quader A, Kouzi A, Friedman SR: Intravenous drug users and maintenance of behavior change. Presented at the V International Conference on AIDS, Montreal, Canada, 1989.
63. Stern LS: Self-injection education for street level sexworkers. In: O'Hare PA, Newcombe R, Buning EC, Drucker E and Matthews A (eds.): Reducing drug related harm. London: Routledge Press, 1992: 122-127.
64. Wieder DL: Telling the code. In: Turner R (ed): Ethnomethodology: selected readings. Middlesex, England: Penguin Education, 1974: 144-172.
65. Sotheran JL, Abdul-Quader As, Friedman SR, Des Jarlais DC, Marmor M, Bartelme S: Needle cleaning knowledge among intravenous drug users in treatment and AIDS prevention policy. Presented at the III International Conference on AIDS, Washington D.C., USA, 1987.
66. Smith D: Chemical dependency and AIDS. Presented at the Joint AMSAODD/NCA meeting, San Francisco, 1987. (Cited in: Waldorf D, Murphy S, Lauderback D, Reinerman C, Marotta T: Needle sharing among male prostitutes: Preliminary findings of the Prospero Project. Journal of Drug Issues 1990; 20(2): 309-334.
67. Grund JPC: Unpublished Interview with Sterling Johnson, Chief Narcotic Prosecutor for New York City on 01/08/1990.
68. Fiddle S: Portraits from a Shooting Gallery. New York: Harper and Row, 1967.
69. Kleber HD: Needle Exchange. Civil Remedies in Drug Enforcement Report, June/July 1991, pp. 3-4.
70. Schuster CR: Foreword. In: Battjes RJ & Pickins RW (eds.): Needle sharing among intravenous drug abusers: National and international perspectives. Rockville: NIDA, 1988: V-VI.
71. Carballo M, Rezza G: AIDS, drug misuse and the global crisis. In: Strang J, Stimson G: AIDS and Drug Misuse. London and New York: Routledge, 1990: 16-26.

REACHING THE UNREACHED: TARGETING HIDDEN IDU POPULATIONS WITH CLEAN NEEDLES VIA KNOWN USERS

Contents

Introduction

Program Description

Methods

Results

Discussion

References

Introduction

Around 1985 the spread of HIV among injecting drug users (IDUs) in the Netherlands became a serious concern to policy makers, drug service agencies and users themselves, organized in so called Junkie Unions. The first AIDS prevention initiatives, aimed at IDUs were established by these pressure or interest groups of drug users. In Amsterdam the AIDS inspired needle exchange was initiated by the MDHG, a user-based organization in 1984. The earliest AIDS prevention leaflet for drug users in the Netherlands was produced by the Rotterdam Junkie Union. Already in 1981 this union was distributing clean syringes and needles at places in the drug scene where IDUs gathered to prevent the spread of hepatitis. When it became apparent that HIV would also mean a menace to Dutch IDUs the Rotterdam Junkie Union immediately started a needle exchange. This was long before the municipal needle exchanges opened. At first, these activities were exposed to firm opposition from the police, the treatment agencies and the municipal authorities. Insight in the magnitude of the AIDS epidemic was yet to come about at these levels. In Rotterdam, where this research was conducted, the municipal needle exchange system was established in the first half of 1987. This rather late start was due to resistance in some parts of the treatment system. Among other arguments, it was felt that needle exchange would encourage injecting and undermine drug free treatment (1). Nowadays, these arguments are generally seen as obsolete and, more important, they have proven to have no scientific basis (2). At the end of 1986 HADON, an at that time small and experimental outreach and drug information

program, took the initiative and set up a needle exchange. Soon the rest of the city was to follow.

In Rotterdam, as in many other Dutch cities, needle exchanges are predominantly tied to the methadone programs, mainly methadone maintenance programs. The advantage of this Rotterdam approach is that these programs are in contact with approximately 1000 regular heroin users (both smokers and IDUs) on a daily basis. However, estimates of the number of heroin users in Rotterdam vary between 2500 and 3500, (3, 4) not counting those drug users from the suburbs, that are also oriented on Rotterdam, both for drugs and help. The proportion of IDUs is approximately 25% for both in and out of treatment groups (5). Although the needle exchanges at the methadone programs are open to non-clients, few actually use them. This means that on a daily basis at least 60 % to 70% of the target group is not reached by the municipal needle exchange system. Additionally, the composition of the in treatment cohort is often subject to rapid changes (4). Furthermore many users have switched from heroin to cocaine as their drug of preference (6) and for this reason methadone presumably has become less valuable for them. Based on these grounds the outreach and information project HADON, which in 1989 fused with the Odyssee foundation, made reaching hidden populations of active out of treatment drug users, generally the unreached, into its main AIDS prevention priority. This chapter gives a brief description of the working methods of this project and present some results of the pilot evaluation study conducted.

Program Description

HADON is a neighborhood-based information program providing outreach, prevention and referral services to active out of treatment IDUs in the north of Rotterdam. The program started in 1985: before the health implications of the AIDS epidemic among the IDU population were generally acknowledged in Rotterdam. Due to this evolving epidemic the priority of the program has been shifted towards the prevention of HIV transmission. Besides the contacts in the project's storefront premises, the outreach workers visit on a regular base many places in the scene

called User collectives. The outreach workers supply the attendants of these places with clean needles, condoms and up-to-date information on HIV/AIDS. The uniqueness of the program lies in its two-tiered organization of needle exchange. In addition to supplying these prevention materials in the storefront and while doing outreach, the workers stimulate certain key persons to exchange needles at their user collectives. This approach was initiated after several program attendants requested large numbers of needles, explaining they lived together with several other active IDUs. These user collectives are frequently visited by other IDUs from the same or related networks. Thus, visitors can exchange individual needles (individual exchange) or, upon special agreement, exchange containers of used needles for boxes of 100 new needles (collective exchange). The containers are plastic and can hold approximately 200 used needles. The HADON collective exchange tier has been experimentally initiated in order to determine if the outreach component of the program could be extended and improved. Secondly, the experiment examined if the motivation of visitors could be reinforced through stimulating a willingness to both exchange and collect used needles and take more responsibility, not only for their own individual health, but also for the health of their IDU peers. This second aspect is based on the observation that social support is a common phenomenon in user networks, as was demonstrated in previous chapters.

Methods

In this pilot evaluation study needle exchange contacts of the HADON program were registered. For each exchange contact the program staff registered date, minimal demographics the number of needles and containers dispensed and the number of needles returned.

The collective exchange was defined as "making available large amounts of sterile needles and sharpsafe containers at strategic places in the scene so that there are always needles available at those places where drugs are used." Individual exchange has been defined as "those exchanges and supply transactions concerning small quantities of needles" (7). According to these program definitions a collective

exchanger was defined as an exchanger who has at least once taken out a box with needles and a container and has at least once returned a container. When needles were returned in a container, the actual number of needles was estimated by a weighing procedure (8). Quantitative data analysis was conducted at the level of 1) the individual exchanger, and 2) the exchange contacts. Staff of the program was questioned on the contents of their work and their knowledge on the attendants and program routines were observed. Data on how the programs goals were addressed in the networks of contacted drug users was collected during the in this thesis reported ethnographic field research.

Results

From May 1988 to June 1989 the HADON needle exchange project involved 104 regularly registered exchangers. 1255 needle exchange contacts were registered. 25 clients (24%) were classified as collective and 79 clients (76%) as individual exchangers. The mean number of supplied needles over the 595 individual needle exchange contacts is almost 9. For the 660 collective needle exchange contacts this number is 79. (table 14.1) During the research period a total number of 57328 needles were supplied of which 91% went out through the collective exchange. In total 46610 needles were returned, which gives an exchange-rate of 81.3%. Profound differences in exchange-rates were found between the two groups: 46.4% for individual and 84.8% for collective exchangers. (table 14.2)

Table 14.2

The program's holding power was remarkable in retaining especially the collective exchangers. The mean number of contacts of individual exchangers is 7.5, for the collective exchangers this is 26.4. (table 14.3) 52% of the collective exchangers visited the program 25 or more times. (figure 14.1) Moreover, the collective exchangers (only 24% of the clients) accounted for 52.6% of the total number of needle exchange contacts. The mean number of days between each needle exchange contact is 15.8. A breakdown for the days of the week does not show big

differences in contact rate. Individual exchangers have their top day on Thursday and collective exchangers on Friday. (figure 14.2)

To complement these results, the ethnographic fieldwork data provide insight in how the program's goals are addressed in the networks of IDUs contacted by the program. Although during the fieldwork places were visited where hygiene regarding injecting was poor, the impression is that users who are engaged in the collective exchange are more aware of risk behaviors and put more energy in health maintenance and hygiene as can be seen in the following excerpts from fieldnotes:

Table 14.3

When Freek had finished injecting he rubbed some Hyrudoid balsam on the needle wound. "One of you guys want some too?", he asked Ronald and Frits. Frits took some of the ointment and rubbed it on his arm. "It's good stuff for your veins", said Frits. "Yes it also disinfects the wound", Freek replied.

Richard is still cleaning up the room: "It is always possible someone is coming by and then I don't like this stuff laying around." The syringes, swabs and other papers go into the plastic bag that's already filled with other used spikes, bloody swabs, etc. "This is for Sak" (a worker of the neighborhood exchange program). For extra security Chris takes of the needle from the syringe. Then he takes out the piston totally and puts the needle inside the syringe. Then he puts back the piston and presses it so the needle inside crumbles together. "Now nobody can hurt himself on it. You have to be aware, I think."

As at many dealing addresses it is not allowed to inject the purchased drugs, IDUs often go to a friends place to inject. Karel is participating in the collective exchange and lets his friends and acquainted IDUs get off at his place:

Although it isn't out spoken, Karel agrees on Jerry wanting to take a shot at his place. Jerry wants to shoot up pure cocaine. He puts his spike on the table and asks Karel for a spoon. Karel asks, "Is that an

old spike you want to use ?" Jerry replies, "Well, old, I've used it one time before, so it's still good for usage." Karel says, "I've got some new one's left from HADON", and hands one over to Jerry, "do you want some more for tonight or the weekend?" Jerry replies, "If you can spare them I'll take some with me." Karel gives him 4 in total.

The needles distributed through the collective exchange are thus having a reach beyond the user collectives. Besides for on the spot use they are distributed among other users to take home. For many IDUs the availability of clean injection equipment is a strong incentive to frequent those places. The ethnographic research was not limited to the work area of the outreach program. The following fieldnote was recorded at the shooting room of a dealing address in another neighborhood:

From the corner where she's still busy with the needle in her hand Anja asks, "Do you have a new syringe for me ?" Eric answers, "No, this is the only one I got. I was lucky, one minute before the pharmacy closed I bought it. Then Anja asks, "Can't I use it when you're finished. I can't use these anymore", pointing at the syringes laying around her on the floor. "They're all blunt, I can't hit a vein," she says as if she's crying or starting to cry. "Or let me only use the needle then. Please let me, I will clean it for you. Don't be afraid. I've got no AIDS. I've been tested recently at the methadone program." Eric still refuses, "I would like to help you but it's the only one I've got. I never lend out my spike to someone else, nobody, not when I have to use it myself again. When I'm not using it again it's their own risk."

Although needle sharing did not take place, the fieldnote illustrates the (often emotional) pressure to share a needle. In this case, in spite of the pressure Eric decided in the interest of his personal health and against the norm of sharing. Nevertheless, the situation can often be tense. When comparing fieldnotes 3 and 4 the functioning of a variable of perceived responsibility for safe use becomes apparent. In fieldnote 3, the perceived responsibility is given a collective quality. Because the needle exchange program dispenses supplies to IDUs, the possession of ample needles allows IDUs to reinforce subcultural norms of sharing, (9) yet in a

safe way. In contrast, in fieldnote 4, traditional subcultural sharing norms conflict with the more recently emerged norms regarding safe use. The perceived responsibility is marked by a strong quality of the rugged individual junkie who resists the pressure of community sharing norms through adhering to a personal behavior code.

Figure 14.1

Not only were needles distributed among visitors of user collectives, an exchange of new needles among user collectives was also observed:

Harrie left with a bunch of new needles to the dealing place where Ronald and Frits had bought their dope. "They have a shortage of shooters there", he said before leaving.

Discussion

When the goals (extending the outreach component of the program, stimulating the users to take an interest into their own health and that of other users) are considered, the program is making an important contribution. In the evaluation study of the British needle exchange schemes a return rate of 62% was found (10). Often it is felt that a high return rate is the result of strict rules regarding a one for one transaction. The findings do not support this thesis. The high return rate of the collective exchange is not accomplished by strict rules but through trust, respect and a shared responsibility in combination with supplying the necessary tools for safe injecting practices.

Likewise, the retention rate of the collective exchangers can be regarded very high when compared with the findings of the British evaluation study (33% over 5 visits) (10). However, the number of dispensed needles, exchange rates and even retention or drop-out rates are insensitive measures of effectiveness.

Figure 14.2

They are only crude indicators of the varying stages in the process of cultural change that is going on in the subcultures of IDUs. It is a fundamental misunderstanding to think that IDUs will confine their needle shopping to one distributor (11). An evaluation of the San Francisco Prevention Point needle exchange found that 13% of supplied needles were returned to exchange sites other than the supplying one (12). People use needle exchanges like they (and everybody) use any other shop and thus similar motivations determine when and what shop will be visited.

An interesting difference is found between the top days of individual and collective exchange. On Thursday most unemployed users receive their social benefit monies and the individual exchange rises markedly. Friday (weekends the program is closed) is the top day for collective exchanges. It seems that individual exchangers are more driven by situational determinants (the availability of money), while the collective exchangers have included getting clean needles in their daily life as a planned activity.

The ethnographic data show that the goals of the program were positively anticipated in the injecting community. Clean needles were at hand at high risk places when needed, distributed through IDU networks and even exchanged among user collectives. Similar results are found in the British needle exchange evaluation study by Stimson and colleagues. Not only did they find that the initially much higher needle sharing rates of the non-attenders of needle exchanges declined much more dramatically than those of the initially lower scoring attenders, but they concluded that, facilitated by needle exchanges, a climate is developing in which the sharing of used injection equipment is no longer the norm. The British researchers related this to the increased availability of needles in the community due to needle exchange, pharmacy sales and other sources. It was found that many attending users supplied their non-attending friends --the high risk group-- with new needles (13). Thus, sufficient availability of clean needles at places where drugs are injected supports the newly emerging norms regarding safe use in a way that these do not conflict with other subcultural rules regarding sharing (9).

A disturbing factor: police raids on dealing addresses

A closer look at table 2. shows that after a steady grow of the issued needles from June 1988 to January / February 1989 in March / April an immense downfall occurs. This collapse may be attributed to increased police raids on dealing / using addresses in that period. While the collective exchange is going down 60% from January to April, the individual exchange rises with almost 1000%. This may be called a short term effect as in the following months the individually issued needles join the downward trend of the collective exchange. This is due to the space reallocation of many of the regular visitors of the closed down addresses towards the west and other parts of Rotterdam. And in this west part of Rotterdam recently history again repeated itself (6). These findings do not only support the assumption that many

active IDUs are actually reached by the collective exchange. They also show that repressive police activity can have a negative effect on AIDS prevention efforts (14, 15). A fine tuning of public health and judicial policy in favor of an effective AIDS prevention policy is urgently needed.

In conclusion, these findings suggest that the exchanging of needles can be made more effective by employing collective social means in contrast to individualistic psychological strategies. The use of naturalistic settings (e.g., the placing of the plastic container at user collectives and dealing addresses), existing drug user networks and appeals to injecting drug user's responsibility may be more powerful determinants of variations in needle exchange rates than psychological characteristics of individuals. In any case, engaging drug users themselves as an integral part and partner of the outreach work provides an interesting topic for further investigation and development. In Rotterdam, it will be interesting to see in the future whether this human resource and social manner of exchanging will be more effective than more technologically inspired approaches (e.g. needle exchanging machines) that are also planned for the city's AIDS prevention efforts.

References

1. Heiningen RM van: Spsitomruilfaciliteiten: Voorstellen tot uitbreiding van de spuitomruilfaciliteiten binnen Rotterdam. Rotterdam: Odyssee, 1988.
2. Buning EC: De GG & GD en het drugprobleem in cijfers, III. Amsterdam: GG & GD 1988.
3. INTRAVAl: Harddrugs & criminaliteit in Rotterdam. Groningen: Stichting Intraval, 1989.
4. Toet J: Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
5. Grund J-PC, Kaplan CD, Adriaans NFP, Blanken P.: Drug sharing and HIV transmission risks: The practice of "frontloading" in the Dutch injecting drug user population. *Journal of Psychoactive Drugs*. 1991; 23(1): 1-10.
6. Grund J-PC, Adriaans NFP, Kaplan CD: Changing cocaine smoking rituals in the Dutch heroin addict population. *British Journal of addiction* 1991; 86: 439-448.
7. Barendregt C: Toen was er AIDS, of de ontwikkeling van de collectieve spuitenomruil. Rotterdam: HADON/Odyssee, September 1989.
8. Blanken P: Spuiten ruilen bij HADON: Een evaluatie van de individuele en collectieve omruil. Rotterdam, 1990.
9. Wieder DL: Telling the code. In: Turner R (ed): *Ethnomethodology: selected readings*. Middlesex, England: Penguin Education, 1974: 144-172.
10. Stimson GV, Alldritt LJ, Dolan KA, Donaghoe MC, Lart RA: *Injecting equipment exchange schemes: final report*. London: Monitoring Research Group, 1988.

11. Stimson GV: Personal communication, 1991.
12. Guydish J, Clark G, Garcia D, Case P, Sorensen J, Chu G: Needle exchange: Where have all the needles gone? presented at the VI International Conference on AIDS, San Francisco, USA, 1990. [Abstract no. S.C.762]
13. Donaghoe MC, Dolan KA, Stimson GV: Life style factors and social circumstances of syringe sharing in injecting drug users. London: Centre for Research on Drugs and Health Behaviour, 1991.
14. Des Jarlais DC, Friedman SR: Shooting galleries and AIDS: Infection probabilities and 'tough' policies. *Am J Public Health* 1990; 80: 142-4.
15. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. *Am J Public Health* 1990, 80: 150-152.

CHANGING COCAINE SMOKING RITUALS IN THE ROTTERDAM HEROIN USING POPULATION

Contents

Introduction

Heroin Self-Administration Rituals and Cocaine Preference

Preparing Cocaine-Hydrochloride for Self-Administration

The Emergence of Gekookte Coke

The Distribution of Gekookte Coke

Motivations for Using Gekookte Coke

Discussion

Conclusions

References

Introduction

In recent years the use of cocaine has become of interest to both researchers and policy makers in Europe. However, there have been few studies that document European cocaine use patterns, circumstances and consequences. In several pilot studies conducted in Rotterdam, cocaine use patterns, circumstances and consequences have been described in the population of heroin users. (1 2) The Rotterdam cocaine studies were extended into a European context with compatible pilots conducted in Munich and Rome. Across these different European cities, relatively common and distinctive cocaine using groups and milieus could be specified. It was determined that cocaine use was prevalent across a wide range of social groups including actors and artists, blue collar workers, students, unemployed, white collar, pimps and prostitutes and people with restaurant, bar and cafe occupations. (3) In Amsterdam during the same time period, Peter Cohen completed an extensive study of 160 persons with an inclusion criterion of a minimum of twenty-five lifetime instances of cocaine use and an exclusion criterion of deviant subcultural origin (junkies, criminals, prostitutes). The results of the Amsterdam study were able to be compared with data from the North American cities of Miami (4 5) and Toronto (6). In the Amsterdam sample, the great majority (70.3%) had a lifetime prevalence of cocaine smoking and a sizable minority of free basing (18.1%). However, in terms of

current prevalence, the large majority of the sample (73.6%) always used intranasally. Only a tiny percentage of the sample (0.6%) had a current prevalence where cocaine was always smoked. For those who had some smoking and basing lifetime experience, half the sample (50.8%) did so rarely for smoking and a much smaller percentage (16.9%) rarely for basing. The Amsterdam study revealed, at least for the non-deviant subpopulation of cocaine users, a rare current prevalence of cocaine smoking or basing patterns. (7)

Despite the popular opinion that Europe was somehow generally behind the United States in the incidence of cocaine use patterns, the Dutch cocaine studies suggested that a number of American patterns could be observed and that they have been in existence for sometime. In both heroin user and non-heroin user populations, cocaine smoking has existed as a common form of self-administration. Historically, cocaine smoking in the form of free basing had entered the United States in the late 1970s among higher dealer circles. (8 9 10 11) By the 1980s, changes in the international cocaine market stimulated the release of a product called crack which was ready-made pieces of smokable cocaine-base that was marketed to a new consumer group, the young underclass. (12 13) James Inciardi documents these changes as follows:

The rediscovery of crack during the early 1980s seemed to occur simultaneously on the East and West Coasts. As a result of the Colombian government's attempt to reduce the amount of illicit cocaine production within its borders, it apparently, at least for a time, successfully restricted the amount of ether available for transforming coca paste into cocaine- hydrochloride. The result was the diversion of coca paste from Colombia, through Central America and the caribbean, into South Florida for conversion into cocaine. Spillage from shipments through the Caribbean corridor acquainted local island populations with coca paste smoking, which developed the forerunner of crack-cocaine in 1980. Known as baking-soda base, base-rock, gravel, and roxanne, the prototype was a smokable product composed of coca paste, baking soda, water, and rum (10).

As Inciardi's account suggests, the smoking of cocaine involves a highly complex political economy which results in the production of a great variety of cocaine smoking products that appear and reappear at various times and places. In the Netherlands, the incidence of cocaine smoking has been documented at about the same time as in the United States (14)

On the demand side, the form of cocaine smoking is related to the interaction between user preferences, price, purity and perceived availability. This interaction results in the formalization of distinctive sequences and meanings associated with the consumption of a drug. These stylized interaction forms have been referred to as drug-administration rituals. The concept of ritual has been a mainstay in the ethnographic literature on drug use. Michael Agar has defined the conditions for ritual events: "For an event to be a ritual event it must prescribe a sequence of psychomotor acts and this prescribed psychomotor sequence must be invested with a special meaning for the person performing that sequence". (15) As Agar has argued, different ritual self-administration of the same drug may involve very different sequences of psychomotor behavior and quite different meanings for the user. In this regard Griffith Edwards statement about heroin may be said to apply to cocaine, insofar as the smoking provides a different effect than injecting. (16) Different from heroin, however, is that for cocaine the smoking effect may be comparable to or even more rapid and intense than injecting. (17 18 19) Moreover, even within the smoking route of self-administration of cocaine the effects may differ. Smoking from a (chamber) pipe provides a more intense effect than chasing.

In this chapter the emergence of a new Dutch cocaine smoking product, cooked coke (gekookte coke) is discussed within the broader context of older cocaine self-administration smoking rituals among heroin users. The prevalence, preferences and self-administration rituals of cocaine use are documented in a series of Rotterdam field studies. Special emphasis is placed upon the emergence of cooked coke highlighting its origins, sales and user motivations. The appearance of cooked coke is compared as an emergent social phenomenon with the appearance of crack cocaine in the Americas. It is suggested that political as well as economic conditions may account for both the appearance and spread of this specific cocaine smoking product.

Heroin Self-Administration Rituals and Cocaine Preference

In the Netherlands, two predominant rituals can be distinguished in cocaine self-administration by heroin users --injecting and smoking. These cocaine rituals correspond to the predominant patterns of heroin self-administration. The most common mode of smoking cocaine (and heroin) is called "chinesing" (chasing the dragon or chasing) in The Netherlands. When chasing, some of the drug is put on an oblong piece of tin foil and heated from underneath. The drug melts, vaporizes and runs along the foil. The vapors are inhaled through a tube which is held in the mouth. With this tube the running and vaporizing liquid is carefully followed (chased) while inhaling. Depending upon the amount of cocaine-base placed on the foil, the chasing involves five to ten runs over the foil with a corresponding number of inhalations. In contrast, the same amount of cocaine-base administered in a free base pipe may only take one or two inhalations producing a much more intense impact effect. In both the observational study and the Central Station survey the preference for smoking rituals among Dutch heroin users is confirmed; only the minority of those people observed (23%) have injecting as their main self-administration ritual while the sizable majority (77%) seem to prefer the smoking form of self-administration. In the survey only 23% injected heroin and 28% injected cocaine. It is clear from both the field observational data and the survey data that cocaine has become increasingly important to Dutch heroin users. The prevalence of cocaine use in this population is rising to alarming levels.

Figure 15.1

Figure 15.1 presents the drugs of first and second choice in the Central Station survey. While heroin is the drug of first choice for 34 respondents cocaine (and methadone) are drugs of first choice for a sizable proportion of the sample (8 for cocaine; 6 for methadone). Looking at drugs of second choice, cocaine is clearly the most prevalent drug of second choice (20 respondents). Compared to the other drug classes (methadone, alcohol, pills and others) cocaine and heroin are in a class of themselves--both are the preferred drugs in this population. The data on the research subjects in the observational study (which was collected about a year later) show that 96% of the heroin users is combining their use of heroin with cocaine (N = 105). In comparing the validity of these findings, 1988 data from the Rotterdam registration system of heroin users in methadone treatment report a prevalence of 72% (N =

1797) cocaine use, not as high as our community users sample but still almost three-quarters of this treatment sample. (20)

Preparing Cocaine-Hydrochloride for Self-Administration

The heroin users observed in this study either speedball (mix) the cocaine with heroin or turn- take them (first cocaine followed by heroin). Additionally, all the dealing addresses that were studied sold both cocaine and heroin to their customers. As mentioned above, the way cocaine is ingested parallels the form used to self-administer heroin; injecting drug users (IDUs) generally inject cocaine-hydrochloride and heroin smokers normally chase or base cocaine- base. In The Netherlands cocaine has been generally marketed in the hydrochloride form. IDUs simply dissolve the drug in water before injecting. Smokers convert the cocaine- hydrochloride into cocaine-base themselves. They chemically remove the Hcl group by use of ammonia or baking salt (bicarbonate) before they ingest the drug via their preferred route. Chapter five presented this process in detail.

The Emergence of Gekookte Coke

Thus, cocaine smokers have to perform a rather laborious and time consuming routine to prepare the cocaine-hydrochloride. This tedious task needs specific tools and chemicals as well as a significant amount of time. This preparation routine can hardly be performed properly outside of a house or other similarly quiet place. In many Dutch cities retail heroin and cocaine dealing inside of houses which does not cause any nuisance to the neighborhood is often tolerated. In Rotterdam, most users buy and often use their drugs at these dealing places called addresses. At most addresses the dealer, who is almost always also a drug user, the opportunity is offered the customers to use the purchased drugs on the premises although generally IDUs are excluded from this privilege. Routinely spoons, ammonia, tinfoil, tissue, toilet paper and water are supplied by the dealer.

Not all drug users have access to these places all of the time. Temporarily, some users are denied entry if they do not buy or are known to be in (enduring) financial need. Other users are denied access more permanently. Usually this is because their behavior and reputation does not conform to subcultural expectations. Among the permanently barred users, the most marginalized polydrug users can be found.

Together with people that come to socialize, buy methadone or prescription drugs, these marginalized users drift toward the Central Station zone where they are both tolerated and constitute the majority of drug users. In this environment among these marginalized addicts, the emergence of a form of cocaine-base called gekookte coke (cooked cocaine) was first documented by the field research team in February, 1990. Intensive inquiry with users already recruited in the study revealed that cooked cocaine had already been available for quite some time at the Central Station. One informant maintained that it has been available for more than two years; another spoke of a half-year. Interestingly, however, when asked whether they knew where to buy crack, no one could say they knew where to find it. When asked for cooked cocaine, everybody immediately understood and said it was for sale at the Central Station.

The Distribution of Gekookte Coke

Cooked cocaine is sold at the Central Station mainly by Surinamese and Moroccan drug users. They do so to support their own drug habit. Other drug users were often observed bringing customers in exchange for a commission. Cooked cocaine is one among the many other drug products (heroin, cocaine-hydrochloride, methadone and prescription drugs) they offer. All of their selling is done in very small units. Normally, these street dealers buy a gram of cocaine- hydrochloride and cook it with ammonia or sodium bicarbonate. Additional refining with ether is not performed. The resulting lump of cocaine-base is crushed, powdered and divided into small amounts, usually just enough for one smoke. These portions are packed in a small piece of plastic wrapper, folded into the form of a drop and sealed by melting the plastic. They are called een balletje (a little ball) and are sold for about 10.- (approximately \$6.- or £3.-) each. Because of factors relating to both the packing of the drug and the rushed atmosphere of a street drug sale, the consumer has much less control over the purchased product. Thus, heroin or cocaine bought at the Central Station are seen as the worst buys in the city. For the purpose of the analysis of content some samples of cooked cocaine were collected. The following fieldnote documents the interaction:

It is Thursday night, 22.50 hour. I am walking through the Central Station hall, which is rather quiet. I decide to take the stairs down to the subway station. Halfway down the stairs, at the entrance of the bicycle storage department two Moroccan men in their early twenties and a middle aged Dutch woman are arguing loudly. They are not rushing by passers hurrying for their train. Walking down the next part of the stairs, I am crossed by a Creole Surinamese man. "Coke?", he whispers. I smile and walk on. Downstairs, apart from a group of four users, the hall is empty. As I walk by I hear a voice whisper "Bruin, ... Coke?". At the end of the hall I slow my pace, observe the group for some seconds and walk their way again. The same voice speaks to me again. It is a blonde Dutch man in his late thirties with a very thin face. He asks if I want to buy coke. "I could see you are a user, although you look good", he flatters me. He has an unknown accent. I ask for gekookte coke (cooked cocaine). Then everything goes very fast. He starts walking and we take the stairs for the square in front of the station. In the entrance of the station hall he approaches a Hindustani Surinamese man of about 35 years and tells him I am a potential customer. For not one moment is there any mistrust and the dealer is willing to sell. The blonde man asks how much money I want to spend. He reports to the dealer that I want to buy for 25 guilders. Next the dealer hands me two tiny drop alike pieces of plastic, containing white powder. The blonde guy assures me the merchandise is of good quality. "If you like you can smoke in the phone booth", he says pointing at the one we are standing next to, "If you're not satisfied, you can come back to me." The dealer says that he regularly smokes in the phone booth so that is not a problem. As I do not have the exact sum and the dealer cannot change, he settles for 24 guilders. When I leave the blonde guy starts to negotiate about his commission.

Motivations for Using Gekookte Coke

All of our informants stated that cooked cocaine is sold at the Central Station for very pragmatic reasons:

"You don't have to prepare it."

"It is ready for smoking."

"It's a gain of time."

"It is not so conspicuous when you don't have to prepare before smoking."

"You don't have to search for a place to cook the stuff anymore."

"You don't need a spoon and ammonia."

The situation at the Central Station zone upon which these reasons are grounded is characterized by specific ecological conditions which have made the adoption of cooked cocaine functional to this group of drug users. There is neither the time nor space at the Central Station zone to cook cocaine-hydrochloride. Especially in the daytime, the zone is crowded by high concentrations of passing travellers. During these hours, the resident group of drug users and other marginals are closely watched by the police. Often they are summoned to move along. The hall of the station is easy to survey and in the past measures have been taken to limit the use of drugs at the station. Thus, there is an incentive to have a smoking product that can be smoked as quickly as possible in any available nook or nitche, for example a telephone booth. Included in the convenience advantages of cooked cocaine are that the user is freed from the necessity to carry around the paraphernalia and chemicals for the preparation of smokable cocaine.

Discussion

In light of the international uproar about crack cocaine precipitated by the experiences of the Americas, the appearance of cooked cocaine in the Netherlands, though sporadic and restricted to a relatively small subpopulation of drug users, is nonetheless worthy of attention. Cooked cocaine and crack are basically similar products. Both are forms of cocaine-base processed from cocaine-hydrochloride containing various impurities and adulterants that are added during production and trafficking. There are however some apparent differences. Cooked cocaine is prepared in quantities of a gram or less by users that sell the substance to their

peers. On the other hand, crack generally is prepared in larger quantities in a kind of cottage industry setting. Williams described a teenage drug ring involved in crack sales. The basic recipe of this group's mixer started with 125 grams of cocaine-hydrochloride. Obviously, one essential difference between cooked cocaine and crack is the scale of production. (12)

Another obvious difference between cooked cocaine and crack is the target group and population of users. In the United States crack has been marketed to new user groups that previously were not involved in heroin or cocaine use. In Rotterdam, the sale of cooked cocaine is limited to a small proportion of the existing heroin using population confined to an area where self-preparation of cocaine-base is hardly feasible. The majority of heroin users prefer to buy and self-prepare cocaine-hydrochloride at house addresses. The use of cooked cocaine has been restricted to the most marginalized polydrug users in the heroin using population. These users are the most vulnerable to the turbulence in the local drug market and cannot find a stable address or living arrangement in order to self-produce their own smokable cocaine. It is also notable that this group's social marginality seems to be correlated in part to ethnic group membership with Moroccan and Surinamese drug users being the most likely to sell and use cooked cocaine.

While the current prevalence of cooked cocaine in Rotterdam seems well contained, there do exist certain conditions that could lead to an expansion of this market. In contrast with many neighboring countries and the United States, in the Netherlands only a minority of heroine/cocaine users have been reported to inject. Most Dutch drug users smoke their drugs. (21 22 23) This suggests that in the heroin-using population in the Netherlands a ready market potential for crack cocaine --a cheap cocaine product especially designed for adapted hard drug smokers-- is already in existence. However, according to the Dutch Ministry of Health, crack use is not prevalent in the Netherlands (24). The research results presented here suggests that the reality is more complicated. Congruent with a number of other independent studies, a large proportion of Dutch heroin/cocaine users are currently preferring the smoking route of self-administration. The established ritual of chining or chasing of heroin has been applied to a new situation of the increased availability of cocaine on the heroin market. Basing of cocaine, a different way of smoking the same cocaine product, is also prevalent. And now the most recent development has been the

appearance of cooked cocaine as a new packaged product on specific street drug markets. All of these developments can be contrasted with the non-deviant cocaine using population where nasal inhalation seems the most stable and prevalent route of self-administration and cocaine smoking in any form is rare. (7)

The development of a stable smoking ritual in the Netherlands provides yet another example of the importance of economic factors on the determination of forms of drug self-administration. In this regard, several recent studies conducted in both Britain and the United States have found that economic pressure is perhaps the most important factor in the initiation of injection as the stable and prevalent self-administration ritual. (25 26 27 28) Because this specific economic pressure is minimized in The Netherlands, large proportions of Dutch drug users do not experience the necessity to initiate and maintain injection as do their British and American counterparts. An additional economic subfactor peculiar to the Netherlands is recognition of organized drug traffickers of the preference for smoking heroin. Thus, in the second half of the Seventies, Turkish and later Pakistan smoking heroin was introduced in large quantities. This marketing strategy by the traffickers further helped to stabilize the smoking pattern and preference. Analytically, this economic factor is a rather complex system in itself, consisting of a dynamic equilibrium of both demand and supply-side subfactors.

The initiation, maintenance and emergence of the cocaine smoking patterns cannot be reduced to a single factorial explanation based solely on economic forces. Psychological factors also have a role to play. Thus, a current psychological determinant may be the fear of contracting AIDS through the use of unsterile needles. (29) Associated with this psychological factor are specific subcultural factors, e.g. The existence of certain needle taboos in specific ethnic groups. And the ritual form itself may produce a specific sociocultural reward for the participant including a sense of solidarity, meaning and emotion. (30) In the sociocultural context of an already dominant heroin smoking ritual, the economic factor of the increased availability of cocaine came into play in the heroin scene during the first half of the Eighties. (2) The preparation of cocaine for smoking became an important part of the self-administration ritual and added a new dimension of meaning to the drug subculture. The preparation of cocaine-base is almost as an important part of the ritual as the actual act of smoking and its impact effect. Users perform the

preparation sequence in a stylized manner with much precision and dedication.

Preparation is an important act in which they do not want to be disturbed. Although idiosyncratic variations on this routine can be observed, the behavioral sequence is highly predictable and subject to various levels of ritualization. (15 31 32)

Along with the economic, psychological and sociocultural factors a significant political factor can be distinguished. The self-preparation of cocaine is preferred because this act allows the user to increase the control the user has over the product vis-a-vis the dealer. Yet, this routine can hardly be performed outside a building, frequently a dealing address controlled by an equilibrium of dealer and police forces. It is almost impossible to prepare smokable cocaine in crowded surroundings such as at the Central Station and other street areas where high levels of police repressive activity are directed. Under these political conditions, preprocessed, cooked cocaine has become available. The local political conditions have provided an exogenous stimulus to the economic equilibrium. On the supply side politics has changed the market and unintentionally encouraged entrepreneurial ventures in cooked cocaine. On the demand side cooked cocaine represents an adaptation to the exogenous political stimulus that satisfies the existing demand for smokable cocaine.

In addition to these local micro political subfactors, there may be other, more macro level political factors which have determined the emergence of both cooked cocaine and crack. Inciardi has contended that drug war interdiction policies could well be a factor in itself toward the creation of a higher demand for crack.

Even if the federal War on Drugs is at all successful in the interdiction of cocaine coming into the United States, the use of crack will still persist.

In fact, a successful war might serve to make crack even more desirable. Should interdiction drive the price of cocaine up to \$300.- or even \$400.- a gram, a few hits of crack could still be had for under \$100.-.(10)

Together with sensationalist mass media coverage definition and governmental high-key prevention campaigns (33), the emergence of crack may indicate how a new drug fad can be inadvertently created that reinforces the natural economic dynamics of supply and demand. In The Netherlands, despite official national government policy, local efforts that have a more warlike profile may be functioning to produce

pockets of cooked cocaine use. Currently, the sale of cooked cocaine at the Central Station in Rotterdam cannot be said to signify a trend of wider significance.

Nevertheless, there has been an increased tendency of police raids aimed at closing down dealing addresses in the west of Rotterdam. The result has been that many users who previously have had a stable address have been disconnected from their regular sources of supply. This turbulence has had unanticipated consequences. AIDS outreach workers who operate in that part of the city report that they have lost contact with a number of their clients only to find them again in the Central Station zone. (34)

Somewhat associated with this local tendency has been, as in the United States, a decreasing availability and quality of cocaine. A Dutch heroin user echoes the sense of Inciardi's argument on the consequences of vigorous interdiction policies: "You know, you have to search well to get some good coke and when you find some, they tell you the price has gone up because good coke is hard to find, they say."

Interestingly, this change of policy has not effected the heroin market. The price of heroin has remained stable at about 100.- a gram (approximately \$60.- or £30.-) while the price of a gram of cocaine has risen from that amount to about 140 guilders. If this tendency continues, a new Dutch situation may be ushered in where the marketing of commercially innovative, cottage industrial cocaine-base products such as crack will both increase the profit margin and meet the demands of users who are forced to adapt their drug-taking rituals to the changing conditions of a decreasing number of house addresses and an increasing time spent on the streets.

Conclusions

In conclusion, the local high-profile police experiments will be judged by their results given the Dutch commitment to a pragmatic drug policy. In the Netherlands, cooked cocaine will probably not spread in the heroin using population if the current preferences of users toward self-preparation of cocaine-base is reinforced. In a situation in which the majority of smoking users can prepare their cocaine-base without fear of being harassed, an effective protective factor (35) against the spread of a cooked cocaine epidemic in this population can be said to function. However, if local policy changes the conditions of, not only, the availability of cocaine, but also of the time and space allocations of drug users, this may result in a supply shift from

cocaine-hydrochloride to cocaine-base at the level of middle market distribution. As a socio-economic phenomenon, Dutch cooked cocaine would be transformed into American crack. The risk of spillage into populations of non-deviant users of cocaine-hydrochloride which now purchase their cocaine through retail sellers outside the heroin scene may well increase through a mechanism of shortages. The risk of a crack epidemic could then become eminent. It might not be too much to say, that the current difference between cooked cocaine and crack is largely the result of drug control policy determinants. Cooked cocaine is the exception to the rule of a normalization policy that aims at socially integrating drugs and their settings into niches of conventional society, while crack is the explosive by-product of a policy aimed at eliminating cocaine and its settings of use in the quest for a drug-free society.

References

1. Kaplan CD, Janse HJ, Thuyns H: Heroin smoking in the Netherlands, In: Drug abuse trends and research issues, Community Epidemiology Work Group Proceedings. Rockville: NIDA; 1986: III-35-45.
2. Kaplan CD, Tappin CP, Thuyns H: Cocaine and sociocultural groups in the Netherlands. In: Kozel NJ (ed.): Epidemiology of drug abuse: Research, clinical and social perspectives. Rockville: NIDA; 1985: IV 5- 16.
3. Avico V, Kaplan CD, Korczak D, Meter K van: Cocaine epidemiology in three European Community Cities: A pilot study using snowball sampling. Rotterdam: Addiction Research Institute, Erasmus University, 1988.
4. Chitwood D: Patterns and consequences of cocaine use. in: Kozel N, Adams E (eds.): Cocaine use in America: Epidemiologic and clinical perspectives. Rockville: NIDA, 1985.
5. Morningstar P, Chitwood D: The patterns of cocaine use -An interdisciplinary study-, Final report No. RO1 DA03106 submitted to the National Institute on Drug Abuse. Rockville: NIDA, 1983.
6. Erickson P, Adlaf E, Murray G, Smart G: The steel drug. Cocaine in perspective. Toronto: Lexington Books, 1987.
7. Cohen P: Cocaine use in Amsterdam in non-deviant subcultures. Amsterdam: University of Amsterdam, 1989.
8. Siegel RK: Cocaine smoking. *Journal of Psychoactive drugs* 1982; 14: 271-359.
9. Adler P: Wheeling and dealing. An ethnography of an upper-level drug dealing and smuggling community. New York: Columbia University Press, 1985.
10. Inciardi JA: Beyond cocaine: Basuco, crack, and other cocaine products. *Contemporary Drug Problems* 1987; 14: 461-492.
11. Inciardi JA: The war on drugs: Heroin, cocaine, crime and public policy. Palo Alto: Mayfield, 1986.
12. Williams T: The Cocaine Kids; The inside story of a teenage drug ring. New York: Addison-Wesley, 1989.

13. Hall JN: Hurricane Crack. *Street Pharmacologist* 1986; 10(9): 1-2.
14. Boetje H: Free-basen, een nieuwe methode van cocainegebruik. *Nederlands Tijdschrift voor Geneeskunde*, 1984; 128(47): 7737-7738.
15. Agar MH: Into that whole ritual thing: Ritualistic drug use among urban American heroin addicts. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 137-148.
16. Edwards G, Arif A, Jaffe J: *Drug use & Misuse: Cultural Perspectives*. London: Croom Helm, 1983.
17. Gawin FH, Kleber HD: Abstinence symptomatology and psychiatric diagnosis among cocaine abusers. *Archives of general psychiatry*. 1986; 43: 107-113.
18. Wallace BC: Treating crack cocaine dependence: The critical role of relapse prevention. *Journal of Psychoactive Drugs* 1990; 22(2): 149-158.
19. Washton AM, Stone-Washton N: Abstinence and relapse in outpatient cocaine addicts. *Journal of Psychoactive Drugs* 1990; 22(2): 135-147.
20. Toet J, Ven APM van de: Het RODIS uit de steigers. Resultaten 1988 Rotterdam, Rapport 65. Rotterdam: GGD afdeling Epidemiologie, 1989.
21. Buning EC, Coutinho RA, Brussel GHA van, Santen GW van, Zadelhoff AW van: Preventing AIDS in drug addicts in Amsterdam. *Lancet* 1986; ii:1435.
22. Korf DJ, Hogenhout HPH: Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drughulpverlening. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
23. Korf DJ, Aalderen H van, Hogenhout HPH, Sandwijk JP: Gooise Geneugten: Legaal en illegaal drugsgebruik (in de regio). Amsterdam: SPCP Amsterdam, 1990.
24. Engelsman EL: Dutch policy on the management of drug related problems. *British Journal of Addiction* 1989; 84: 211-218.
25. Casriel C, Rockwell R, Stepherson B: Heroin sniffers: between two worlds. *Journal of Psychoactive Drugs* 1988; 20(4): 37-40.
26. Parker H, Bakx K & Newcombe R: *Living with heroin: The impact of a drugs 'epidemic' on an English Community*. Philadelphia: Open University Press, Milton Keynes, 1988.
27. Burt J & Stimson GV: Report of in-depth survey of intravenous drug use in Brighton. London: Monitoring Research Group, 1988.
28. Power RM: The influence of AIDS upon patterns of intravenous Use- Syringe and Needle Sharing- among illicit drug users in Britain. In: Battjes RJ, Pickins RW (eds): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 75-88.
29. Ghodse AH, Tregenza G, Li M: Effect of fear of AIDS on sharing of injection equipment among drug abusers. *British Medical Journal* 1987; 295: 698-699.
30. Collins R: Towards a neo-Meadian sociology of mind. *Symbolic Interaction* 1989; 12(1): 1-32.
31. Carter WE: The Aymara, and the role of alcohol in human society. In: Du Toit BM (ed.): *Drugs, rituals and altered states of consciousness*. Rotterdam: Balkema, 1977: 101-110.
32. Zinberg NE: *Drug, set, and setting: The basis for controlled intoxicant use*. New Haven: Yale University Press, 1984.
33. Brecher EM: *Licit and illicit drugs*. Boston-Toronto: Little, Brown and company, 1972: 321-334.
34. Barendregt C: personal communication 1990.
35. Kaplan CD, Vries M, Grund J-PC, Adriaans NFP: Protective factors: Dutch intervention, health determinants and the reorganization of addict life, in: Ghodse H,

Kaplan CD & Mann RD (eds.): Drug misuse and dependence. Park Ridge, NJ: Parthenon Press, 1990: 151-161.

DRUG USE CONTEXTS AND HIV-CONSEQUENCES: THE EFFECT OF DRUG POLICY ON PATTERNS OF EVERYDAY DRUG USE IN ROTTERDAM AND THE BRONX

Contents

Introduction

The Micro Settings of Everyday Drug Use

The Larger Social Context of Drug Use in Rotterdam and the Bronx

Policy Determinants of Drug Use Contexts

Future Work in Research, Practice and Policy

References

Introduction

Because of the urgency of the AIDS problem, the initial research exploring the connections between HIV and injecting drug use tended to focus largely on quantifiable variables seen as directly related to the routes of transmission of HIV e.g. injecting frequency, number of needle sharing and sexual partners, the use of bleach or sterile needles. But the context of drug use, its natural settings, characteristic local user networks, larger social structures and official drug policy may have more significance for determining and, ultimately, for changing those concrete behaviors which are the basis of HIV transmission.

If any lesson can be learned from the AIDS epidemic so far, it is that biomedical research on the epidemics' patterns must be wedded to concomitant psychosocial research. While both the origins of AIDS and the prospects for efficient vaccines and treatments are still cloudy, the spread of infection is much better understood. This is largely due to the efforts of social science research. The first wave of HIV in the US and Europe occurred through several relatively well-specified routes of transmission - among them the sharing of contaminated injection equipment, generally referred to as needle sharing. This has been the basis of the very high incidence of AIDS cases among some populations of IDUs. (1 2 3 4) Social scientists, using network analysis, were able to identify the vectors of spread within the homosexual community (5) where this knowledge was almost immediately utilized by gay community-based

organizations to mobilize and educate in the interest of AIDS prevention. Likewise the later findings of social science research relevant to AIDS in the IDU community have been a strong stimulus to encourage outreach activities and organizing of prevention programs in many countries, The Netherlands and the U.S. among them. (6 7 8 9) However these findings have sometimes led to a certain narrowing of focus in which the physical instrument of transmission --the syringe and needle-- have been somewhat fetishized. Perhaps because of the involvement of biomedical researchers unfamiliar with the worlds of the drug users, almost exclusive attention has been focused on the physical objects responsible for transmitting the virus -- needles and syringes-- often obscuring the fabric of social relationships in which these objects are used. None the less prevention strategies and messages (stop shooting and bleach before sharing), the institution of bleach bottle distribution and needle exchange programs, have all been a positive result of this research. Yet while such initiatives are a healthy antidote to some deep-seated prejudices and pessimism that drug users are so socially deviant and disorganized that they are either unwilling or unable to change their behavior; they bear the danger of too narrow a focus on one limited aspect of the complex realities of drug use. Several recent studies (10 11 12 13) have reported non IV drug use related to increased risk for HIV-transmission, e.g. crack use and its relation to sexual exposure. These should lead to a revision of the concept of risk and the ideas for prevention of HIV in this group.

The concept of needle sharing is both analytically and practically an incomplete notion --even for understanding the spread of HIV among IDUs. The focus on the physical instrument of transmission may inhibit a deeper look, beyond needle sharing, into drug use contexts - the world of multiple sharing and care taking practices that constitute the bonds of relationships of drug users and their social networks. The earliest descriptions of these networks (14 15) emphasized the more negative aspects of the lives of drug users, characterized as ripping and running, and also revealed important structural features of a more positive nature. Subsequently, distinct temporal and social variables of drug use contexts were characterized (16) and daily, weekly and monthly variations were found to effect many IDU behaviors including congregating, buying drugs and seeking treatment --all with consequences for HIV risk. (17 18) Location and sites of drug use also provide important contextual

variables as can be witnessed by the early recognition of the importance of shooting galleries for HIV-spread among IDUs in the Bronx. (17 19)

This paper compares the drug use contexts and their potential HIV consequences in two very different communities- Rotterdam and the Bronx. Rotterdam with a population of 580.000 has 2500 -3500 opiate users (4.3-6.0/1000) of which an estimated 23% are injectors and 77% smokers. (20) In contrast, the Bronx with a population of 1.2 million, has 30-40,000 regular opiate users (25-33/1000) who are overwhelmingly injectors (>90%). If the South Bronx (population 500,000 / 20-30,000 IDUs) is considered separately, this rate is 40-60/1000. Rotterdam and the Bronx have both known massive physical and social destruction. Rotterdam was heavily bombed in May of 1940 devastating thousands of its buildings and displacing tens of thousands of families for a decade or more. Since the war, the city has slowly and carefully been rebuilt and today has an international reputation for its architectural innovations and urban renewal projects, especially the availability of high quality affordable housing for working class families. The Bronx is a city that has also been devastated -- in this case by urban blight and fire which, in the twenty years between 1960 - 1980, destroyed numerous buildings and displaced large populations. (21) The Bronx, however, has seen only limited urban renewal and its problems have worsened throughout the last decade.

The two settings constitute a natural experiment in process for over 40 years. This paper aims at identifying a common set of variables that function (albeit under very different conditions) to influence injecting drug use practices in the two areas. These variables are differentially determined by social context and drug policy options all of which have HIV consequences. By identifying common variables that are sensitive to policy interventions, even though they are imbedded in very different conditions, it becomes possible to generalize and weigh the consequences of such policies beyond their particular application in a local community.

The Micro Settings of Everyday Drug Use

Rotterdam

The Addiction Research Institute of Erasmus University has conducted a field research study into the drug taking practices of heroin users in Rotterdam. In this study, 95 drug administration rituals were recorded: half involved injecting and two-thirds of those injecting used new, sterile syringes. Only three cases of re-using another's needle and syringe were recorded and, in these cases, circumstantial factors led to unsafe injecting interactions. (22) Needle sharing defined as two or more people actually using the only available syringe one after the other in a predictable, stereotypical and planned (ritual) sequence was not observed in the Rotterdam study. Thus, needle sharing does not appear to be a major feature of injecting drug use in Rotterdam. The sharing of drugs (23) however was found to be an important and frequent phenomenon, both among IDUs and non-IDUs, as drug use was rarely an individual act. Dealing places, private homes, and homes of friends were the most common places where drugs were ingested. Most of the drug sales observed at dealing address were followed by direct ingestion of (at least a part of) the drugs purchased. To have more individuals present than the dealer and the buyer was a typical feature of these dealing addresses. Often users purchased drugs in pairs, and frequently a pub atmosphere prevailed. While needle sharing was rare, in half the observations of injecting and non-injecting use, drugs were shared. IDUs were very frequently found to share drugs by a special technique using two syringes which has been termed frontloading (24). Discussion with researchers and drug users from numerous countries revealed that this technique is utilized far beyond Rotterdam. (25 26) It was hypothesized that this technique bears the risk of passing on microbiological and viral infections (including HIV) (27 28 29) but this is unknown to most IDUs. In both Rotterdam and Amsterdam drug agencies have included frontloading in their prevention campaigns. But this kind of information campaign, aimed at rapid behavior change, may again function to isolate and emphasize the instrument of transmission (the needle) and overlooks the larger picture of drug sharing practices, which are embedded in a much broader pattern of social behaviors of heroin users. The Rotterdam data provide abundant evidence of a range of sharing behaviors among users which contradict the stereotype of predators, ripping off society and each other. While such behavior does indeed occur, another more prevalent pattern seems to be sharing and mutual support. Drug users share many valued things such as housing, food, money, clothing and child care. Often they help

one another with daily problems associated with drug use lifestyles where sharing fits the broader context of coping with craving, needs for human contact, and the hardships of life on the margins of society. In this context the ritualized sharing of drugs serves as a strong symbolic binding force. These social behaviors were documented in many studies and in different places. (14 30 31 32) Sharing and its associated pattern of reciprocal aid, somewhat balances the constraints of the ripping and running world, (15) the competition, violence and mistrust of everyday life. Both the helping and sharing, and the ripping and violence, are all normal behaviors under abnormal and extreme conditions.

The Bronx

Between 1985 and 1989 a series of studies were conducted in the Bronx at the Montefiore Medical Center, and elsewhere in N.Y.C. to determine HIV prevalence, rates and risk factors among IDUs in methadone treatment (40-50%) (11 33) and in street samples (50-70%) (34). These studies and others have demonstrated the clear connection between injection histories and practices and HIV risk, specifying frequency of injection, sharing of injection equipment and especially the use of shooting galleries and of cocaine. (11 33) Clearly injecting practices occupied a central place in the transmission of HIV in the Bronx. Yet little was systematically known about the motivations or details of these practices, nor much about the specific settings in which injecting took place, or the experiences of the drug users themselves. While ethnographic studies examining the social context of drug use in New York and elsewhere in the U.S. did in fact continue throughout the AIDS era (35 36 37) these perspectives were often divorced from larger AIDS policy considerations. In New York City thinking about AIDS is dominated by the demands for acute medical care of the immense case load of people sick with AIDS -- 2000 per day in hospital beds and another 20 - 30.000 symptomatic in the community. This context would not normally be considered a promising environment for ethnographic research aimed at illuminating the context of drug use or discovering interventions which promote effective long term measures to minimize HIV spread. Yet, even in the Bronx, it has been possible to initiate a range of activities which produce ethnographically valid data and should form the basis for more effective outreach and AIDS prevention activities. These include studies of natural support systems in

families of IDUs with AIDS (38), the emergence of durable support groups for HIV positive drug users and their partners, (39) new volunteer services (40), the incorporation of HIV infected individuals and former drug users as paid outreach staff (39) and engaging the issues of reproductive choice in groups of HIV+ women. (41) These activities are possible because they all operate within and build upon the natural support systems of drug users. By entering these systems in their natural settings it is possible to both learn and help.

Several outreach programs have been created in the Bronx intended to provide AIDS education and risk reduction services to women involved in street life, active drug use and sex sales. But it was often found that in this population, concerns about HIV and AIDS were low on the list of priorities. The context of everyday life of drug use in the Bronx entails a broad spectrum of more immediately threatening risks. AIDS education, as it is commonly delivered in NYC, does not satisfy the needs of this population if it focuses only on AIDS and does nothing to address the more visibly stigmatizing and very damaging aspects of their everyday lives. An outreach approach for this group must include lessons in safer professional sex and proper needle use, and must match clients' perceived needs with public health goals. Merely teaching needle sterilization is not well accepted because it requires an extra step and more time and effort to prevent something that this group does not chronically worry about. But teaching trackmark prevention and more competent injection technique was well received in this group as it requires no extra time, no major change in behavior, can be taught in a few simple lessons, and provides information most IDUs desire because it helps them economically and permits more efficient use of drugs. An individual who is able to find veins quickly not only lessens his or her own risk of infection, theft of drugs, or arrest; but now has a skill for which other less talented injectors are willing to pay. This puts safer self-injection practices and AIDS education into the economic framework -- a perspective that is never absent in the Bronx drug scene. AIDS education, offered in this context, is perceived as more meaningful by the drug user and facilitates better connections with health care professionals.

The Larger Social Context of Drug Use in Rotterdam and the Bronx

Great differences exist between everyday life in the drug subcultures of Rotterdam and the Bronx; In large part because the social policies in the two cities have been so different. In Rotterdam, as in other Dutch cities after W.W.-II, much effort was put into the process of urban renewal of the old neighborhoods, and provision of health care, education and social services. The housing situation of even the lowest income groups in The Netherlands can be called decent. The devastated areas, and burnt out buildings characteristic of the South Bronx and other slum areas of New York are, in Rotterdam, only memories of the enormous bombing of the city in May 1940. In Rotterdam only a small minority of drug users do not have regular housing. (42) When unemployed, they receive social benefits (like any other unemployed citizen) and these are high enough to support the basic costs of living. Tied to this social benefit people receive free medical care on demand and legal and social services are generally free or at low cost. Drug treatment was funded beginning in the early 1970s and is readily available for those who want it. In Dutch political organization these matters have the status of requirements of the state constitution. Recently Peter Hartsock from NIDA has described this as the social responsibility characterizing Dutch society. (43) Since the beginning of the 1980s a relatively open atmosphere concerning drugs and addiction has existed in The Netherlands. The drug problem is viewed as one of the many social problems society faces which cannot be solved by repression. A higher priority is placed on the strategy of controlling the use of drugs and their damage rather than on their elimination. (44 45) This policy is supported by broad political consensus.

If Rotterdam reflects the positive consequences of a policy of social responsibility, the Bronx can be said to display the effect of decades of neglect, exploitation and political corruption. Between 1960 and 1980 large areas of the Bronx burned. This massive destruction of low cost housing (60,000 units) was due to several interacting factors - aging buildings, overcrowding associated with the influx of immigrants to NYC, and the reduction of vital city services, such as fire, sanitation, and building safety inspection. Consequently a large population (250,000) was uprooted and once vital communities were left in tatters: the total population shrank by 20% as middle class families fled to the surrounding suburbs. This led to the formation of a large

underclass population in which over one million New Yorkers have now lived for two or more generations. New York estimates the number of adults periodically or permanently homeless to be as high as 50,000, (46 47) while the city's emergency shelter capacity stands at around 9000 beds. There is little existing stock of rooming houses, or SRO's (single room occupancy) remaining - most of these have been gentrified.

Ironically, most of New York City's poor and homeless are by legal statute entitled to social and financial benefits, but not without identification documents. It is difficult for a person to get or retain the necessary ID (birth certificate, social security card) without a mailing address. Those who do manage to secure ID and public assistance benefits can easily lose them by failure to meet requirements for recertification of eligibility e.g. a quarterly face-to-face interview with a welfare worker in the central office. Health insurance (Medicaid) does come as part of the public assistance package, but only part of the drug users manage to maintain their eligibility. Furthermore most NYC public medical facilities are chronically overcrowded and are not receptive to any but the emergency needs of drug users and even to these only reluctantly. The demand for drug treatment greatly exceeds the available slots.

Policy Determinants of Drug Use Contexts

The Dutch drug policy has resulted in a stable availability, moderate prices and more consistent quality of drugs on the Dutch illegal market throughout the years compared with neighboring countries and the U.S.. (48) As in many other Dutch cities heroin and cocaine are mainly sold at so called house addresses: places where more or less stable social friendship groups of drug users gather and where they can buy and use their drugs in a relatively calm atmosphere. These places are often tolerated if they do not cause too much nuisance in the neighborhood. (see chapter nine) Only a minority of the subjects (23%) in the Rotterdam study used injecting as the main mode of administration, the other 77% smoked their drugs. This is made possible by the nature and purity of heroin available in The Netherlands. South West Asian base heroin (which is designed for smoking) has been available since the early 1980s and

the purity has been rather constant at $\pm 40\%$. (49 50) The average purity of (ceased) cocaine in 1991 was 80%. (51) Mainly because of economic considerations, it seems that many Dutch users do not feel the necessity to start injecting, as do many of their foreign counter- parts. (48 52 53 54 55) The Dutch experience shows that when drug market variables are relatively stable over time, a well defined and stable smoking pattern can develop. (56) Widespread injecting can thus be seen as adaptation to a situation of low availability of drugs of known purity. Furthermore in The Netherlands the sale or possession of injecting equipment has never been restricted or a reason for arrest. Nowadays in Rotterdam (and in Amsterdam), when an IDU gets arrested (for example for committing acquisition crime) and is found to be carrying a used syringe, it is routinely taken in and exchanged for a sterile one. In 1991 the Rotterdam police precincts exchanged 2500 needles of arrested IDUs. (57) Finally the easy accessible drug treatment system in Rotterdam, ranging from low threshold methadone maintenance to detoxification clinics, therapeutic communities and resocialization and education projects, also adds a great deal to the stability of Rotterdam users. 1100 treatment places are available for a population of 2500 - 3500 heroin users (>33%).

New York is a frontline of the War on Drugs. Over 250,000 drug related arrests occurred in 1989. At any given moment, 20 to 25.000 drug users are incarcerated in city jails and an additional 10 - 15.000 in state prisons. (58) The majority of drug sales occur in unstable and dangerous settings. Packaged drugs are sold through holes in the boarded up doors or windows of abandoned buildings from which an unseen person passes an untried quantity of pre-packaged drugs to an anonymous customer, or pre-packaged drugs are sold by small groups of people who wander a particular block, or hover in a particular doorway. There is no privacy, and little time is allotted for each interaction. A good brand (quality) may attract lots of business, but this also attracts more police activity. This causes the constant moving around of dealer-collectives, resulting in the breaking of friendship ties and no quality guarantees whatsoever. Frequently, large numbers of young homeless drug users live together in abandoned apartment buildings, sharing the available resources. As there are no public toilets or washhouses, many homeless people live without access to clean water. Occasionally the crack house becomes a stable shelter. In one case

in the Bronx, one functioned this way for nearly a year for more than 70 people. The place had two suspicious fires (and was ultimately demolished by the fire department) but not until the buildings were actually flattened and the rubble hauled off did the population disperse. Due to their high visibility and large numbers they were forced to take up residence in different locations and their own community support system was destroyed.

The supply of heroin is often unstable in New York and this affects both price and purity. In fact, the purity level of New York City heroin is a complicated and confusing matter. Very little scientific data on the subject is available. Anecdotal sources (accounts from heroin users, service providers, field researchers and newspapers, such as the New York Times) present conflicting information. The quality of street level heroin is generally regarded as extremely unstable and varying by dealing site, time and brand name. (see below) The June 1990 Drug Price List Guide of the Narcotics Division of the New York City Police Department lists a 3% to 5% purity for \$10.- glassines (dime bags), supposedly containing 1 to 3 grains (1 grain equals 65 mg), but also remarks that in some areas of the city purity may be as high as 25% to 35%. (59) With a 1991 market share exceeding 70%, China White, a No.4 heroin has become the undisputed market leader of New York City's illicit heroin trade, supplemented by Pakistani, Nigerian and Mexican products. (60 61)

Recent press publications have reported an upsurge in street heroin quality to levels averaging 20% (62) to 40%. (60) A recent DEA Domestic Monitor Program study to determine the purity and price of retail level heroin showed an average purity in 20 exhibits analyzed of 41.4%, with a range between 2 and 76%. (63) The higher heroin quality has been related to bountiful supplies in the Golden Triangle, increasing import and dropping wholesale prices, and the increased control of traffickers over distribution, preventing that the drug is diluted as it passes down to the level of the street dealer. (60) To get some sense of the street validity of these figures, the author discussed them with three active NYC heroin users and several New York based colleagues, involved in drug use research, during work visits in June 1990, June 1991 and October 1992. The information indicating rising street purity was met with considerable skepticism. The consulted heroin users relegated the press publications to the realm of fiction. They felt that the bags they had scored over the last years at

their regular coping zone's (South Bronx; Lower East Side; Williamsburg, Brooklyn) were of "the same shitty quality as always". "If the dope was that strong as these stories claim it is, people would fall out (overdose) the moment they got off". (64) In June 1990, one NYC researcher put it like this: "Rising quality? I don't believe that, The quality of heroin is about the same as it was 5-8 years ago and 15 years ago. Everything is in it, but the kitchen sink". (65) John Galea of the Street Research Unit in New York sincerely questioned the representativeness of the DEA survey for the NYC street scene. (66) And indeed, the sample is small, the sampling method unclear (location, undercover purchase or confiscated, etc.), and the established purity range extremely wide.

Puzzled by the apparent discrepancies between the different sources, in June 1991, the author visited the laboratory of the New York City Police Department (NYCPD), where all confiscated drugs are tested in the process of preparing court cases. The following figures were kindly supplied by Ms. Bianchi, the chemist in charge of drug analyses. In 1990 her staff conducted 98.000 analyses (excluding FBI and DEA cases), 70.4% concerned cocaine and 17.3% heroin. (67) Analyses results are recorded in hand-written logs. Because of this immense case load and the juridical incentive for the analyses, the results are not registered in a manner that makes scientific processing of these data possible. Browsing over the pages of the log with the results of quantitative analyses of heroin indicated that over the period from June 1989 to June 1991 purity of street level samples (glassine \$10.- bags) ranged from less than 1% to almost 75%, while a few larger samples contained up to 98%. A subsequent conversation with the chief of the Special Projects Unit of the NYCPD Narcotics Division confirmed this picture. He claimed that for those users that have good connections ballpark heroin (high quality; $\pm 40\%$) is increasingly easy to procure. In his opinion, the purity of street heroin has definitely increased, but may fluctuate highly. (61) Clearly, these sources do not contradict the results of the DEA survey.

The mismatch of these results with the opinions and experiences of the consulted researchers and heroin users is conspicuous. In addition to the already mentioned instability, two additional reasons may account for this discrepancy. First, these users may have unwittingly been using heroin which gradually increased in purity over a

period of years. This assumption is supported by the account of a user who frequently traveled between New York and Amsterdam. His cross-atlantic consumer comparisons did not indicate large differences in purity. (68) Second, the average heroin quantity per street bag analyzed at the police laboratory decreased from ± 1.5 to 2 grains "some years ago" to only 0.25 to 0.5 grains in recent analyses. (67) Thus, while quality went up, quantity went down. A current purity of New York City's heroin of $\pm 40\%$ on average does therefore not seem an unrealistic estimate, but local and temporal variations still make the product very unpredictable. The purity of ceased crack and cocaine hydrochloride is generally higher and more stable. Although the NYCPD laboratory has the impression of a slight decrease in purity over 1990 and 1991, 70% and up is normal. Because of the unstable purity, smoking heroin, which can be perceived as a protective factor for HIV contamination (69), is hardly a serious option for New York's opiate using population.

IDUs have minimal access to sterile syringes in New York. The city's modest syringe exchange experiment was closed down for political reasons after one year of operating and the distribution of less than 400 syringes. The former Health Commissioner, Dr. Woodrow Myers, has withdrawn City funding for bleach distribution programs, contending that these approaches give the wrong message and condone drug use. The possession of a syringe is a misdemeanor, using it for drug injection a felony, and carrying a syringe is an invitation for police harassment. Given the legal status of syringes in NYC, renting injection equipment in a gallery is advisable. Not only does it protect the IDU from arrest on needles charges but may serve to convince (necessarily distrustful) dealer/gallery managers that an unfamiliar user is safe to admit to the venue. Shooting galleries with stable populations, consistent brands and family atmosphere exist, but this safer atmosphere is often threatened by chronic shortages of privacy, money, food, heat, drugs, or by intense harassment from police. Thus current drug policies foster less stable settings (abandoned buildings, cars, shooting galleries) where the same injection equipment is used over and over again by people often having no other relationship.

Rotterdam's current policies have resulted in a relatively stable, aging heroin using population, (70 71) where annually, approximately 70% of the population is in contact with one or more drug agencies - 35% on a daily basis. Most Dutch drug users have

more in common with their unemployed, but non drug using neighbor, than with the stereotypical alienated dope fiend. (69) In this context the messages of safe drug use and AIDS prevention can be communicated and more easily implemented and the actual sharing of needles and syringes has decreased significantly. (4 9 72) In New York City, with an estimated 200,000 IDUs, there are over 35,000 high threshold methadone maintenance slots available and another 6000 drug free therapeutic community beds. But, on a lifetime basis, fewer than 50% of New York's IDUs have had any contact with a treatment program and only 15 to 20% has daily contacts - most of these in methadone programs offering only minimal social services. (73) The typical New York IDU seems to be in far worse shape regarding health, legal and socioeconomic status than his or her Rotterdam counterpart. With the constant threat of arrest, unstable housing, and little secure income, AIDS just is not the biggest problem on the block for New York's drug users.

Still the drug subcultures in both cities bear some remarkable similarities. Heroin and cocaine are the most used drugs in both populations and a large proportion of users substitute or supplement their use with methadone. Benzodiazepines and barbiturates are widely used to modulate the negative side effects of excessive cocaine use and to boost insufficient methadone doses. In New York it seems that drug users have complete pharmaceutical manuals in their heads and use whatever drugs they can lay their hands on. In Rotterdam this is an obsolete phenomenon, not seen since the early seventies when Dutch drug policy was still rather similar to American drug policy.

The sharing of drugs and other resources is an important feature of the drug subculture in both cities. Drug users, labeled as structural outsiders and ostracized by mainstream society, have become mutually dependant in order to fulfill some basic human needs. The ritualized sharing of a most precious, scarce and binding object or substance has symbolic value and separates the in-group from the out-group. (74) In both cities drugs fulfill these requirements. But in Rotterdam, with sufficient availability of sterile syringes and AIDS education efforts, needle sharing has become a deviant act. There just is no structural scarcity, justifying a need to share injection equipment and hence the HIV risk is lowered. In the Bronx, even though there is clear evidence of drug user awareness of the risks of sharing needles

or syringes, conditions dictate that even the most motivated IDU will still share injection equipment some of the time. (11)

Interesting differences can also be seen in the level of ritualization expressed in the use of symbols and the different degree of organization and monetarization of mutual services. As explained before, retail drug sales at house addresses in Rotterdam are almost always weighed in the presence of the customer in a rather calm atmosphere. Buyers often sample their purchase on the spot, which gives them some degree of genuine control over purchased quality. Purchases are simply wrapped in packs of torn up magazine paper. In the lingo of the Rotterdam drug scene, heroin and cocaine have simply been known as bruin (brown = heroin) and wit (white = cocaine) for more than five years. In New York, drugs are almost always sold in public settings with great tension on the part of both the buyer and seller to move on quickly. Buyers have very little control over the pre-packed drugs they procure. The glassine heroin bags are stamped with striking and poignant brand names such as Miracle, Deathwish, Overkill, Untouchables, Check Mate, Obsession, Passion, Bodybag, Divinity, and Asesiño, (the murderer). A brand name symbolizes the dealing organization and the quality it represents. Thus, the New York buyer's only control is in this symbolic brand name.

In Rotterdam, IDUs often administer their drugs at places that, on a face level, have some similarities with New York shooting galleries. However no explicit financial charges are asked for use of the setting although sometimes drugs are shared with the owner of the place. In both cities many IDUs suffer from collapsed veins and abscesses due to insufficient hygiene. Although many IDUs insist on injecting themselves, others are happy to get help from another, more experienced, injector. In contrast with the New York practice involving paid house doctors or professional hitters in shooting galleries (75 76 77 78), no explicit commercial counterpart of this service was found in Rotterdam.

The presence of antibiotic dealers alongside heroin and cocaine dealers in the South Bronx is indicative of the interest that the street population takes in maintaining their health, and treating illnesses that do occur -- even if only to permit them to still hustle

for drugs. In Rotterdam where most drug users have full health insurance this phenomenon has not occurred.

All these phenomena, with similar or different outcomes in both cities, are firmly rooted in the respective drug subcultures. Although the drug subculture to many people seems a closed parallel world, mainstream cultural norms, policies and responses to (illicit) drug use plainly have important consequences on the everyday practice of drug users. These norms actually define and structure the features and social position of the drug subculture to a great extent. As Becker pointed out, the more any deviant group (i.e. deviant from the dominant cultural norms and values) is repressed and ostracized, the more it will profile itself as a deviant group and the more the deviant behavior, norms and values will get emphasized and reinforced in that group. (74) This results in a highly separated, intra-dependent, mono-focused subculture, in which members are very distrustful of mainstream culture. Inevitably this leads to skepticism about mainstream AIDS campaigns. In this respect the differences between the two cities are clear. Sharing and caretaking behaviors tend to be much less stable in New York than in Rotterdam and the more stereotypical negative behaviors associated with drug use are more likely in this harsh environment. Hence the powerful association of drug use, drug dealing and violence in NYC and the predictable hostility of the general public to the drug user.

Future Work in Research, Practice and Policy

The dynamics of the AIDS epidemic among IDUs in these two cities highlights the importance of basic knowledge of the lifestyles, behaviors and interaction of drug users in their naturally occurring social networks. Needle sharing is a partial representation of this complex reality, but overemphasizing the physical instrument of transmission is erroneous. The complex interaction patterns of economic and sociocultural factors involved in illegal drug use are equally important to the spread of HIV. It is this complex arrangement of interacting factors which should be the object of intensive future research. Without a clear concept of the everyday reality of drug use, quantification can be risky. Frontloading would not have been identified using a

questionnaire, simply because, at first, the researchers were not looking for it. It was a serendipitous finding based on observation of the natural setting of drug use. Ethnographic studies provide the best opportunity for assembling a database pertaining to these naturalistic phenomena. Following this, quantitative instruments can be designed and utilized to test the specific hypotheses generated.

Both qualitative and quantitative research can gain much in value if the knowledge of active drug users can be employed in all phases of research. This requires the active collaboration of practicing drug users, an idea that is gaining attention and application. (79 80) For example, the use of focus groups which can be very important in validating new instruments and evaluating analysis outcomes. (40 81) Employing stabilized drug users in research teams will create natural entry into what is, for most researchers, a hidden parallel world. It can add a great deal of depth to analysis, disclose new leads and perspectives, and will surely stimulate scientific discussion in research teams on matters that before were undisputed or unrecognized (e.g. the extent and significance of needle sharing). It furthermore empowers the drug users as it gives them the opportunity to correct stereotypical or incomplete depictions.

Priorities regarding goals and methods of drug services need to be reconsidered, particularly in places like the Bronx where only a minority of drug users are in daily contact with treatment and helping agencies. When it is acknowledged that the prevention of AIDS must have a higher priority than the dubious goal of a drug-free society, effective harm minimization strategies have to be designed, brought into practice and evaluated. (82) Active drug users without contacts with treatment or helping agencies will find themselves more often in risk situations than users who are in contact with these institutions. Reaching and educating this hidden population must be given top priority. This should be accomplished through a permanent street outreach and organizing process of active IDUs equipped with the necessary tools to change their behavior in the desired direction. Outreach work plays a crucial role in this process, as the only possible way to reach this population is to enter its own territory.

However, outreach to this population should meet specific conditions. Rescue-style outreach programs frequently alienate or insult those they seek. AIDS education programs, while generally more comfortable dealing with sex and drug issues, frequently make the mistake of only talking about AIDS, sterile syringes, bleach and condoms. The outreaching hand is either trying to grab and rescue the people it wants to reach or pushing a message upon them. The AIDS prevention message is naturally of great importance, but can only be properly received when it fits within the existing knowledge base and everyday life of those involved. Active drug users themselves can have significant roles in the prevention of HIV spread and infection. Their information and exchange networks might be utilized in promoting risk reduction messages and behavior change through the social organization of the drug subculture. The message should be wrapped in a package that addresses the concrete and recurrent problems tied to this specific lifestyle and links up with existing norms and practices. Employing indigenous people as outreach workers in such programs will be of essential value. This is especially important in Europe as drug use among immigrant populations emerges as a major issue requiring attention.

Both in Rotterdam and New York good examples can be found of innovative working methods that are in concordance with the rules and daily practices of the drug subculture. In Rotterdam most syringe exchange programs are tied to the methadone programs, which are in contact with less than 40% of the heroin users. These needle exchanges only reach a limited number of active, out-of-treatment users. As these users are perceived as being most at risk, HADON tries to fill this gap by running a needle exchange in close cooperation with active IDUs. At highly frequented places where drug injection is allowed (some dealing places, some private homes of injectors; not actual shooting galleries) sharpsafe containers and boxes of sterile syringes are available. The syringes are exchanged among the visiting injectors and distributed through the networks by IDUs themselves. (83)

In New York, an underground needle exchange is run by volunteers from ACTUP and the National AIDS Brigade. These volunteers (many of them (ex-)users) do their covert work at places that are frequently visited by IDUs -- shooting galleries, street copping zones and other congregation sites. They offer a wide variety of injecting paraphernalia such as syringes, cookers, cotton, alcohol wipes, antibiotic ointment,

bleach, water, a choice of needles, and also condoms. When needed and asked for, IDUs are referred and guided to methadone maintenance and other treatment modalities. (84) In addition, IDUs are thought valuable street skills for safer self-injection (preventing trackmarks, abscesses, edema, cellulitis, venous collapse, etc.) and safer professional sex (assessing the violence potential of johns, sneaking condoms onto them during oral sex, faking vaginal and anal sex with the hands). (75)

Both these initiatives are well accepted by the consumers and therefore offer a potentially effective mode for teaching and promoting lasting behavior change. However, both programs experienced strong opposition from established drug treatment programs, municipal policy makers and, in New York, the law: institutions not used to looking at these issues from a user perspective. So in Rotterdam, HADON got restricted from supplying drug wrappers printed with AIDS-prevention messages and needle exchange addresses to dealing drug users, although this was a perfect example of the application of marketing theory principles. And in New York, street health educators risk arrest and prosecution for their efforts to save lives, and bleach distribution programmes experience punitive budget cuts. It should be understood that mainstream morality regarding drug use, and old concepts of dealing with drug problems have become obsolete in the AIDS-era, and do not meet the criteria for effective AIDS- prevention efforts. The drug services field is in serious need of pragmatic approaches based on sound knowledge of the drug subculture and its mechanisms.

Drug policy is a decisive factor (for better or for worse) in the course and development of the AIDS epidemic among drug users and, potentially, the wider population. Inappropriate drug policies in many countries may actually facilitate the dissemination of HIV infection. (85) Thus the continued spread of AIDS among IDUs should become a sentinel for the failure of prevalent drug policies. Several countries, among them Australia, France, Germany and Switzerland, are all in the process of reconsidering their current drug policy --especially about the use of methadone and possession of clean injecting equipment. While the AIDS epidemic appears to support the need for a public health approach and pragmatic drug policies built on harm minimization principles, the U.S. government still aggressively promotes its drug policies as an example for many western countries, despite its evident failure at

home. And, while many Americans have raised their voice against this harm maximization policy (86), the war on drugs rhetoric is getting more and more intense. Oddly enough, this situation shows some peculiar similarities with the situation in the Soviet Union just before Michael Gorbachov took over, or the last days of the Berlin wall. In these cases the old fashioned communist rhetoric were the last desperate cries of a system on the verge of collapse, and completely discredited and rejected by the population. After more than 70 years of prohibition of free enterprise, Eastern Europeans now admit the failure of the communist experiment, abandon its ideologies and turn to pragmatic approaches to their countries' cataclysmic economic problems. Likewise, 75 years of policies based on drug prohibition have brought the world no solution for compulsive use by a minority of drug users -- indeed the problem worsens as this dogmatic policy is extended and it has brought our societies nothing but devastation and an ever increasing social and political predicament.

Perhaps it is time for some perestroika in the drug wars.

References

1. Brettle RP: Epidemic of AIDS related virus infection among intravenous drug abusers. *BMJ* 1986; 292: 1671.
2. Chaisson RE, Moss AR, Onishi R, Osmond D, Carlson JR: Human immunodeficiency virus infection in heterosexual intravenous drug users in San Francisco. *Am J Public Health* 1987; 77: 169-172.
3. Marmor M, Des Jarlais DC, Cohen H, et al.: Risk factors for infection with human immunodeficiency virus among intravenous drug abusers in New York city. *AIDS* 1987; 1: 39-44.
4. Hoek JAR van den, Coutinho RA, Haastrecht HJA van, Zadelhoff AW van, Goudsmit J: Prevalence and risk factors of HIV infections among drug users and drug using prostitutes in Amsterdam. *AIDS* 1988; 2: 55-60.
5. Darrow WW, Pauli ML: Health Behavior and Sexually Transmitted Diseases. In: Holmes KK, et al. (eds.): *Sexually Transmitted Diseases*. New York: McGraw-Hill, 1984: 65-73.
6. Friedman SR, Des Jarlais DC, Sotheran JL: AIDS Health Education for intravenous drug users. *Health Education Quarterly* 1986; 13: 268-272.
7. Wiebel WW: Combining ethnographic and epidemiologic methods in targeted AIDS interventions. In: Battjes, R.J. & Pickins, R.W. (eds.) *Needle Sharing among Intravenous Drug Abusers: National and International Perspectives*. Rockville, NIDA, 1988: 137-150.

8. Friedman SR, Serrano Y: AIDS-Related Organizing of IV Drug Users From the Outside. International Working Group on AIDS and IV Drug Use Newsletter 1989; 4(2): 2-4.
9. Hartgers C, Buning EC, Santen GW van, Verster AD, Coutinho RA: Intravenous druggebruik en het spuitenomruilprogramma in Amsterdam. Tijdschrift Sociale Gezondheidszorg 1988; 66: 207-210.
10. Schoenbaum EE, Stern LS, Webber M, Drucker E, Gayle H: HIV Antibody and High Risk Behaviors Among Non-Intravenous Drug Using Women Obtaining Abortions in the South Bronx, New York City. presented at the V International Conference on AIDS, Montreal, Canada, 1989. [abstract no. Th.D.P.1]
11. Schoenbaum EE, Hartel D, Friedland GH: Crack use predicts incident HIV seroconversion. presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. ThC 103]
12. Golden E, Fullilove M, Fullilove R, Lennon R, Porterfield D, Schwartz S, Bolan G: The effects of gender and crack use on high risk behaviors. presented at the VI International Conference on AIDS, San Francisco, USA, 1990. [abstract no. F.C.742]
13. Chiasson MA, Stoneburger RL, Hildebrandt DS, Telzak EE, Jaffe HW: Heterosexual transmission of HIV associated with the use of smokable freebase cocaine (crack). presented at the VI International Conference on AIDS, San Francisco, USA 1990. [abstract no. Th.C.588]
14. Preble E, Casey JJ: Taking care of business - the heroin user's life on the street. Int J Addict 1969; 1: 1-24.
15. Agar MH: Ripping and running. New York: Seminar Press, 1973.
16. Kaplan CD, Korf D, Sterk C: Temporal and social contexts of heroin-using populations: An illustration of the snowball sampling technique. Journal of Nervous and Mental disease 1987; 175(9): 566-574.
17. Hartel D, Schoenbaum EE, Selwyn P, Drucker E, Wasserman W, Friedland GH et al: Temporal patterns of cocaine use and AIDS in intravenous drug users in methadone maintenance. presented at the V International Conference on AIDS Montreal, Canada, 1989. [abstract no. Th.D.O.2]
18. Drucker E: AIDS and addiction in New York City. American Journal of Drug and Alcohol Abuse 1986; 12: 165-181.
19. Friedland GH, Harris C, Butkus-Small C, Shine D, Moll B, Darrow W, Klein R: Intravenous drug abusers and the acquired immunodeficiency syndrome (AIDS): Demographic, drug use and needle-sharing patterns. Archives of Internal Medicine 1985; 145: 1413-1417.
20. Grund J-PC, Adriaans NFP, Kaplan CD: Changing cocaine smoking rituals in the dutch heroin addict population. British Journal of addiction 1991; 86: 439-448.
21. Wallace R: Urban desertification, public health and public order: 'planned shrinkage', violent death, substance abuse and AIDS in the Bronx. Soc Sci Med 1990; 31(7): 801-813.
22. Grund JPC, Kaplan CD, Adriaans NFP: Needle sharing in The Netherlands: An ethnographic analysis. American Journal of Public Health 1991; 81(12): 1602-1607.
23. Grund J-PC, Kaplan CD, Adriaans NFP, Blanken P.: Drug sharing and HIV transmission risks: The practice of "frontloading" in the Dutch injecting drug user population. Journal of Psychoactive Drugs 1991; 23(1): 1-10.
24. Grund J-PC, Kaplan CD, Adriaans NFP, Blanken P, Huisman J: The limitations of the concept of needle sharing: The practice of frontloading. AIDS 1990, 4: 819-821.
25. Froner G: Digging for diamonds: A lexicon of street slang for drugs and sex. San Francisco: Health outreach team productions, 1989.

26. Valk P van der, Jong W de: Verslaafd in Polen. *Intermediair* 1988; 24(17): 59-63.
27. Wolk J, Wodak A, Morlet A, et al.: Syringe HIV seroprevalence and behavioral and demographic characteristics of intravenous drug users in Sidney, Australia, 1987. *AIDS* 1988; 2: 373-377.
28. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. *Am J Public Health* 1990; 80: 150-152.
29. Esteban JI, Shih JWK, Tai C-C, et al.: Importance of Western blot analysis in predicting infectivity of anti-HTLV-III/LAV positive blood. *Lancet* 1985, 2: 1083-1086.
30. Feldman HW, Biernacki P: The ethnography of needle sharing among intravenous drug users and implications for public policies and intervention strategies. In: Battjes RJ & Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 28-39.
31. Mata AG, Jorquez JS: Mexican-American intravenous drug users' needle-sharing practices: Implications for AIDS prevention In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 40-58.
32. Des Jarlais DC, Friedman SR, Sotheran JL, Stoneburger R: The sharing of drug injection equipment and the AIDS epidemic in New York City: The first decade. In: Battjes RJ, Pickins RW (eds.): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 160-175.
33. Schoenbaum EE, Hartel D, Selwyn P, Klein RS, Davenport K, Rogers M, Feiner C, Friedland G: Risk factors for human immunodeficiency virus infection in intravenous drug users. *New England Journal of Medicine* 1989; 321(13): 874-879.
34. Des Jarlais DC, Friedman SR, Novick DM, et al.: HIV-1 infection among intravenous drug users in Manhattan, New York City, from 1977 through 1987. *JAMA* 1989; 261: 1008- 1012.
35. Williams T: *The Cocaine Kids, the inside story of a teenage drug ring*. New York: Addison-Wesley, 1989.
36. Johnson BD, Goldstein PJ, Preble E, Schmeidler J, Lipton DS, Spunt B, Miller T: *Taking care of business: The economics of crime by heroin abusers*. Lexington, MA: D.C. Heath, 1985.
37. Hamid A: A crack rashomon: Contextual diversity and differential impact of an opaque drug in New York City's low-income neighborhoods. *Urban Affairs Quarterly* (in press).
38. Walker J, Small S: *AIDS and families*. New York City: Akkerman institute for family therapy. 1989. (unpublished report)
39. Eric K, Drucker E, Worth D, Chabon B, Pivnick A, Cochrane K: The women's center: A model peer support program for high risk IV drug and crack using women in the bronx. presented at the V International Conference on AIDS, Montreal, Canada, 1989. [abstract no. Th.D.P.7]
40. Poust BL: Project BRAVO (Bronx AIDS Volunteer Organization): An inner city AIDS volunteer program, New York: BRAVO, 1990, pp. 1-4.
41. Pivnick E, Jacobson E, Erik E, Hsu MA, Drucker E: Residence and reproduction: Reproductive choices among HIV positive IV drug using women. presented at the American Public Health Association, New York City October 1, 1990.
42. Wavere B van, Kocken P, Ven T. van de: *Onder dak, zonder thuis: dak- en thuisloosheid in Rotterdam*. Rotterdam, Gemeentelijke Gezondheidsdienst Rotterdam / Gemeentelijke sociale Dienst Rotterdam, 1990.
43. Hartsock P: *Trip report Europe*. Rockville: NIDA, 1987.

44. Engelsman EL: Dutch policy on the management of drug related problems. *British Journal of Addiction*, 1989; 84: 211-218.
45. Grund J-PC: Where do we go from here? The future of Dutch Drug Policy. *British Journal of Addiction* 1989; 84: 992-995.
46. Joseph H, Roman-Nay H: The homeless intravenous drug abuser and the AIDS epidemic. In: Leukefeld CG, Battjes RJ, Amsel Z (eds.): *AIDS and Intravenous drug use: Future directions for community based prevention research*. Rockville: NIDA, 1990: 210-253.
47. Baxter E, Hopper K: The new mendicancy: Homeless in New York City. *American Journal of Orthopsychiatry* 1982; 52(3): 393-408.
48. Kaplan CD, Janse HJ, Thuyns H: Heroin smoking in the Netherlands. In: *Drug abuse trends and research issues, Community Epidemiology Work Group Proceedings*. Rockville: NIDA, 1986: III-35-45.
49. Huizer H: Analytical studies on illicit heroin, chapter XI The illicit heroin market. PhD dissertation. Rijswijk The Netherlands: Forensic science laboratory, 1988: 151-164.
50. Huizer H: Samenstelling en kwaliteit van illegale heroïne in Nederland: Een globaal overzicht over de periode 1970-1989, en een verslag over 1990. *TADP* 1992; 18(1): 1-12.
51. Huizer H, Poortman - van der Meer A: Section illicit drugs: General report 1991. Rijswijk, The Netherlands: Forensic Science Laboratory, Ministry of Justice, 1992.
52. Casriel C, Rockwell R, Stepherson B: Heroin sniffers: between two worlds. *J Psychoactive Drugs* 1988, 20(4): 37-40.
53. Power RM: The influence of AIDS upon patterns of intravenous Use- Syringe and Needle Sharing- among illicit drug users in Britain. In: Battjes RJ, Pickins RW (eds): *Needle sharing among intravenous drug abusers: National and international perspectives*. Rockville: NIDA, 1988: 75-88.
54. Parker H, Bakx K, Newcombe R: Living with heroin: The impact of a drugs 'epidemic' on an English Community. Philadelphia: Open University Press, Milton Keynes, 1988.
55. Burt J, Stimson GV: Report of in-depth survey of intravenous drug use in Brighton. London: Monitoring Research Group, 1988.
56. Grund J-PC, Blanken P: From 'Chasing the Dragon' to 'Chinezen': The Diffusion of Heroin Smoking in the Netherlands. Rotterdam: Instituut voor Verslavingsonderzoek (IVO), 1993.
57. Geurs R: Spuitemruil in Rotterdam. Rotterdam: GGD Rotterdam e.o., 1992.
58. New York State Department of Corrections: Annual report. Albany New York, New York State Department of Corrections, 1989.
59. Bradley JJ: Drug Price List Guide. New York: NYCPD, Narcotics Division, Special Projects Unit, June 1990.
60. Liu M: The curse of 'China White'. *Newsweek* 14-10-1991, pp. 10-16.
61. Bradley JJ, Lieutenant, NYCPD Narcotics Division, Special Projects Unit: Personal Communication, June 1991.
62. Treaster JB: Cocaine users adding heroin and a plague to their menus. *The New York Times*, July 21, 1990.
63. Cited in: Frank B, Galea J, Simeone R: Drug use trends in New York City December 1990. New York, New York: New York State Division of Substance Abuse Services, 1990.
64. Keats T, New York City: personal communication, October 1990.
65. Woods J, NDRI, New York City: personal communication, July 1990.
66. Galea J, Street Research Unit, New York City: Personal communication, June 1991.

67. Bianchi M (chemist in charge of drug analyses of the laboratorium of the New York City Police Department): Personal Communication, 1991.
68. Michael C: Personal communication, 1991.
69. Kaplan CD, Vries M de, Grund J-PC, Adriaans NFP: Protective Factors: Dutch intervention, health determinants and the reorganization of addict life. In: Ghodse H, Kaplan CD, Mann RD. (eds.): Drug misuse and dependence. London: Parthenon, 1990: 165-176.
70. Toet J, Ven APM van de: Het RODIS uit de steigers: Resultaten 1988. Rotterdam: GGD, afdeling Epidemiologie, 1989.
71. Toet J: Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
72. Kaplan CD, Morival M, Sterk CE: Needle exchange IV drug users and street IV drug users: A comparison of background characteristics, needle and sex practices, and AIDS attitudes. In: Community epidemiology work group proceedings Rockville: NIDA, 1986: IV- 16-25.
73. Frank B: Report on treatment services - Methadon register. New York: New York State Division of Substance Abuse Services, 1989.
74. Becker HS: Outsiders: Studies in the sociology of deviance Glencoe, Ill.: Free press of Glencoe, 1963.
75. Stern LS: Self-injection education for street-level sexworkers, In: O'Hare, P., Newcombe, R., Buning, E., Drucker, E., Matthews, A. (eds.) Reducing the Harm from Drug Use. London: Routledge, 1992: 122-127.
76. Murphy S, Waldorf D: Kickin' down to the street doc: Shooting galleries in the San Francisco Bay Area. Contemporary Drug Problems 1991; 18(1): 9-29.
77. Sterk CE: Living the life: Prostitutes and their health. Ph.D dissertation Rotterdam: Universiteitsdrukkerij 1989.
78. Des Jarlais DC, Friedman SR, Strug D: AIDS and needle sharing within the IV-drug use subculture. In: Feldman DA, Johnson TM (eds.): The social dimensions of AIDS. New York: Praeger Publishers, 1986: 111-125.
79. Chitwood DD, McCoy CB, Inciardi JA et al.: HIV seropositivity of Needles from Shooting Galleries in South Florida. Am J Public Health 1990; 80: 150-152.
80. Des Jarlais DC, Friedman SR: Shooting galleries and AIDS: Infection probabilities and 'tough' policies. Am J Public Health 1990; 80: 142-144.
81. Pokapanichwong W, Douglas D, Wright N, Vanichseni S, Choopanya K: What Thai intravenous drug abusers (IVDA) say about their beliefs and behavior: Report of a series of focus group discussions. presented at the V International Conference on AIDS, Montreal, Canada, 1989. [abstract no. Th.D.O.1]
82. Newcombe R: The reduction of drug-related harm: A conceptual framework for theory, practice and research. In: O'Hare P, Newcombe R, Buning E, Drucker E, Matthews A (eds.): Reducing the Harm from Drug Use London: Routledge, 1992: 1-14.
83. Grund J-PC, Blanken P, Adriaans NFP, Kaplan CD, Barendregt C & Meeuwssen M: Reaching the unreached: Targeting hidden IDU populations with clean needles via known users. Journal of Psychoactive Drugs 1992; 24(1): 41-47.
84. Elovich R, Sorge R: Toward a community-based HIV prevention outreach strategy which incorporates needle exchange for New York City. 1992. (unpublished manuscript)

85. Wodak A: AIDS and injecting drug use in Australia: A case study in policy development and implementation. In: Strang J, Stimson GV (eds.): AIDS and drug misuse. London: Routledge, 1990: 132-143.
86. Siegel L: The criminalization of pregnant and child-rearing drug users: An example of the American "harm maximization program". In: O'Hare, P., Newcombe, R., Buning, E., Drucker, E., Matthews, A. (eds.): Reducing the Harm from Drug Use London: Routledge, 1992: 95- 107.

Part III: Self-regulation, Drug Culture and Drug Policy

SOCIAL DETERMINANTS OF SELF-REGULATION IN PSYCHOACTIVE DRUG USE: TOWARDS AN EXPLANATORY MODEL

Contents

Introduction

The Secondary Analysis of the RODIS Data

Determinants of Drug Use Self-Regulation

A Feedback Model of Drug Use Self-Regulation

Conclusion

References

Introduction

Part one of this dissertation analyzed the rituals and rules that have developed in the subculture of regular users of heroin and cocaine. The presented data showed that both on individual and group level the functions and meanings of drug use rituals are multifold and intertwined, serving instrumental as well as symbolic goals. The analysis linked these rituals with other ritualistic behavior patterns, which serve several intrinsically human --individual and social-- needs. Part two presented studies on the health consequences of the observed administration, and sharing and exchange rituals, their relationship with policy and an intervention which utilized and reinforced common ritualized behaviors.

A prominent feature of the studied rituals and rules is that they aim to control or regulate the drug taking experience. This is most apparent in the stereotypical behavioral sequences surrounding self-administration of drugs by the individual drug user, but it also plays a distinct role in many observed (ritualized) interactions, for example in the recurrent sharing of drugs. Thus, the data offer strong support for Zinberg's theory, that the control of drugs is largely established by (sub)culturally based social controls --rituals and rules (as Zinberg called them, social sanctions) which pattern the way a drug is used. Ultimately, users themselves regulate their use of intoxicants through a peer based social learning process, in which specific rituals and rules are developed as adaptations to the effects of the interaction between drug, set and setting. (1 2)

However, it has also become clear that the ability to self-regulate drug use is not evenly spread over all users. Some users seem able to use large amounts of cocaine (and heroin) without or with little of the characteristic problems described in chapter five, whereas others --typically the down and out users hanging around the Central Station-- actually use very little of these (expensive) drugs, but seem most susceptible to their related (psychological) problems.

This paradoxical observation leads to two suppositions: 1) As was already contended in chapter 7, self-regulation or control is more than limiting ones intake. It equally refers to the prevention and management of drug related problems and should, therefore, be perceived as a multidimensional process. 2) The effectivity of rituals and rules in exercising control over drug use is apparently moderated by additional factors, which impact on the individual's ability to comply with these social regulatory processes.

Recapitulating, it is thus clear that, conforming to Zinberg's theory, rituals and rules are key determinants of drug use self-regulation processes. However, Zinberg's theory does not explain the intra-group variation in the ability to effectively utilize these social controls, found in this study. Nor does it account for the multidimensional nature of self-regulation processes. Besides rituals and rules, the theory does not explicitly address other potential factors which may impact upon the effectivity of these social controls. In that respect, Zinberg's theory is rather static. This does not make it invalid, but does, indeed, signify a need for revision. The theory requires certain adaptations and elaborations that will make it possible to explain the dissonant findings of this study.

In this chapter an attempt is made to revise Zinberg's theory. The chapter will introduce and discuss two distinct (clusters of) factors that, in addition to the concept of rituals and rules, are thought to be essential determinants of the self-regulation processes that control drug use. These factors are Drug Availability and Life Structure. (3) The chapter will explore the nature of, and interactions between Drug Availability, Rituals and Rules, and Life Structure. The chapter's ultimate purpose is to present a hypothetical model which explains controlled use of drugs in terms of a dynamic interaction between these three distinct factors. Evidently, this model builds

on the work of Zinberg as it seeks to specify and detail the variables that constitute the social setting, in which self-regulation processes take shape.

To demonstrate the model, a secondary analysis of the 1989 treatment admission data of the Rotterdam methadone programs (RODIS) is presented. This secondary analysis was stimulated by some peculiar results in the 1989 RODIS report regarding the prevalence of cocaine use in different ethnic groups, which, apparently, resembled the two cocaine/heroin patterns found in the field study (see chapter 5.4.3). The 1989 RODIS report contains separate chapters on cocaine use and ethnicity, in which cocaine use (and whether or not this was experienced as problematic); life time prevalence of overdose, psychotic episodes, unconsciousness and seizures; the level of heroin use; and their mutual associations are considered. (4) These chapters provide the basic material for the present secondary analysis.

First, these RODIS data are presented and discussed in light of the analyses in chapters five and seven. Ensuing, the issue will be further investigated in the secondary analysis. In the next step the findings of this analysis will be discussed in terms of the three determinants of the proposed model, whereafter a general explanation of the model will be presented.

The Secondary Analysis of the RODIS Data

Distribution of cocaine use and problems associated with its use

RODIS classified treatment applicants' cocaine use in three categories --non-user (32%), user (62%) and problematic user of cocaine (6%) (N = 1095). (4) Not surprisingly, the reported prevalence of overdose, psychotic episodes, unconsciousness and seizures increased from non- users to cocaine users to problematic cocaine users. The prevalence of these problems was also analyzed for differences between the following (aggregated) ethnic groups: Dutch, Surinamese/Antilleans, Moroccans and foreigners. The Surinamese/Antillean group scored lowest on all four indicators, while the Dutch had the highest scores on three out of four.

The ethnic composition of the cocaine use groups showed a highly compatible picture. The Dutch users were over-represented among non-users and, more dramatically, among problematic users. 36% of the Dutch users abstained from cocaine use, 55% used cocaine without perceiving it as a problem and 9% labeled their cocaine use as problematic. In contrast, among the Surinamese/Antillean users the prevalence of cocaine use was significantly higher (77%), but seemingly this resulted in fewer problems (3%). Problematic cocaine use was apparently absent among Turkish and Moroccan clients, while the foreign clients resembled the total population.

Comparison of these data suggests that the bulk of the problems in the cocaine using groups is presented by the Dutch, whereas the Surinamese/Antillean contribution is negligible. Thus, while they use less frequently, Dutch heroin users more often experience problems with cocaine use and score highest on three out of four of the RODIS indicators of problems. A completely opposite picture is presented by the Surinamese/Antillean heroin users. They score lowest on all problems indicators, using cocaine significantly more often with considerably less problems.

Table 17.1

Distribution of cocaine/heroin patterns

As was established in chapters five and seven, heroin use is positively correlated with cocaine use --heroin is employed to control the negative side effects of cocaine. This general trend was also clear in the RODIS data (see table 7.1 in chapter 7.2.2). However, the ethnographic analysis also suggested the existence of two different cocaine/heroin patterns (see chapter 5.4.3). The ethnic breakdown of the quantity of heroin use of the treatment applicants in RODIS showed differences between the ethnic groups, which might confirm these patterns. Dutch users were rather evenly spread over the three categories, while the Surinamese/Antillean and other groups were more often using little or much heroin. (table 17.1). (4) To further explore these differences, the RODIS data has been broken down to the genuine ethnic groups/nationalities. The resulting database consisted of 651 Dutch, 175 Surinamese, 67 Moroccan, 34 German, 29 Antillean and 20 Turkish users. 17 users

came from Belgium and Luxembourg, 38 from other EC-countries and 9 were non EC European residents. 9 users came from other Mediterranean countries and 34 from non European countries.

Table 17.2

Table 17.3

The analysis of their cocaine use showed an increased difference between the Dutch and the Surinamese, while the cocaine use patterns of the Antilleans fell somewhat in between. The Moroccan and Turkish patterns did not change and the Germans more or less resembled the Dutch. Apart from the Surinamese and the Dutch, all other groups were either too small or too heterogeneous for further inclusion in the analysis. Table 17.2 shows the large difference in cocaine use prevalence between the Dutch and the Surinamese heroin users, applying for treatment in Rotterdam.

To assess the relationship between cocaine use and level of heroin use in the two groups, these variables were cross-tabulated for the Dutch and Surinamese heroin users separately. Tables 17.3 and 17.4 present the results of this procedure. Comparison of these tables first of all supports the suggestion that differences in heroin use are related to cocaine use. The patterns of heroin use of the Dutch and the Surinamese non cocaine users follow a rather similar distribution, corresponding with that of the total group of non-users (see table 7.1 in chapter 7.2.2). In both groups, almost 3/4 of the people use either less than 250 mg (low level) or between 500 mg and 1 g (high level), with the Dutch displaying a somewhat higher prevalence of low level use. About 1/4 uses 250-500 mg (middle level).

Table 17.4

These results also seem to confirm the cocaine/heroin patterns observed in the field study. Among Dutch cocaine users a gradual increase in heroin use can be observed --the middle and to a greater extent the high level increase, while the low level group decreases (pattern I). When Dutch users take cocaine, they counter the negative side effects of this stimulant with increasing doses of heroin. In the Surinamese group the high level increases considerably and the low level slightly, while the size of the

middle group strongly decreases. When taking cocaine, Surinamese users either use much (pattern I) or little heroin (pattern II). Thus, a large number of cocaine taking Surinamese heroin users can do so without increasing their use of heroin as well.

Recapitulating, the results of this comparison suggest that Surinamese users more often use cocaine, but experience less problems with the use of this drug, even without employing the typical subcultural self-medication procedures, involving increased heroin use.

The results of these secondary analyses correspond largely with the analysis of the fieldwork data. The results presented in chapter five suggested that users, who are successfully involved in dealing are in a better position to exercise control over their drug use (and have strong incentives to do so), suffer less from cocaine related problems and depend less on the heroin controls cocaine ritual as they use much more cocaine than heroin (pattern II). Indeed, this correspondence can be understood by the relatively high involvement of the Surinamese users in consumer level drug transactions. Although all ethnic groups in this study were, to some extent, involved in consumption level dealing, the Surinamese dominated retail dealing, occupied the key positions in multi-ethnic crews, and had the best connections with the middle level suppliers, as these positions were often held by Surinamese also. Suppliers contacted during the field work were all Surinamese males, who abstained from heroin use. Several recent studies confirm the relatively higher involvement of the Surinamese in dealing. (5 6 7 8 9 10 11) For example, in the study by Grapendaal and colleagues 55% of the dealers were Surinamese, whereas these only comprised 19% of their sample. (5)

The suggestion that it is their higher involvement in dealing which enables the Surinamese users to exercise control more efficiently is examined in the following section in terms of availability, life structure, and rituals and rules.

Determinants of Drug Use Self-Regulation

Drug Availability

Maintenance of the high use levels typical in the population under study requires a sufficient availability of drugs and the necessary funds to finance this. Legal income is normally insufficient to cover high drug use levels. In general, the resources required can therefore only be generated through prostitution (which is not illegal in The Netherlands) or illegal activities, such as acquisition crime or (mostly consumption level) drug dealing. Success in one of these hustles is thus an important condition for maintaining high use levels. In the Dutch context the most lucrative hustle is dealing. Consumption level drug transactions are tolerated to a large degree. In contrast, stealing has become more difficult over the years, partly due to increased property protection. The heroin using population in The Netherlands is furthermore aging and criminal careers become too demanding for long-term and older users. (5) Not only are they fed up with the stressful daily pursuit of money, their skills (in terms of e.g. physical condition and appearance) have also deteriorated.

Similar factors may influence the earnings of users involved in (street) sex work. The number of johns and the price for the sexual service may vary with daily fluctuations in weather, physical condition (e.g. signs of withdrawal), genital infections, periods and pregnancies (women only), and seasonal and event specific influences, such as Christmas or football matches. (12) Deterioration of appearance as a result of aging, poorly managed drug use and lifestyle is of major economic concern for sex workers. A successful hustle in crime or prostitution is therefore reserved for only a minority of users. Given the Dutch conditions, successful users --in terms of being able to consume (high quantities of) drugs without experiencing the, often axiomatically with drug use associated problems-- will thus most likely be involved in dealing.

Drug Availability Influences the Nature of Rituals and Rules

Drug availability has thus a pivotal impact on the daily lives of regular drug users. Artificially limiting the availability of drugs may limit their intake of drugs to a certain degree, but at considerable (psycho-social) expense. Apart from creating a strong economic incentive for the sale of drugs in unregulated entrepreneurial circuits, restricting availability induces and fuels a psycho-social process, which greatly multiplies the ritual value of drugs --ushering in a narrowing of focus in the user.

Fixation on the drug will lead to strong limitation of behavioral expressions when the drug is craved and difficult to obtain, and to impulsive indulgence when a dose becomes available. As a result, rituals and rules around the drug become less directed at self-regulation and safety in the sense of health, but more at safeguarding, covering and facilitating drug use and the related activities (e.g. drug transactions) itself. (13) In contrast, the absence of uncertainty as to the whereabouts of the next dose liberates the user from the recurrent obsessive worries with (obtaining) the drugs and the necessity to chase them. Sufficient availability thus creates a situation in which rituals and rules can develop which restrain drug use and induce stable use patterns. As the results indicate, this does not necessarily mean lower levels of drug use. When the drugs are sufficiently available, the studied users can seemingly sustain high consumption levels, without developing typical drug related problems.

A sufficient drug availability can therefore be understood as a precondition for the development and effectivity of rituals and rules that regulate the patterns and levels of use.

Life Structure

An equally important condition is that the availability of drugs is stable. This requires that the hustles users engage in to generate drug money are successful on a stable basis. Recently Faupel constructed a typology of heroin users, based on a cross-classification of drug availability and life structure --which refers to "the regularly occurring patterns of domestic, recreational, work, and criminal activity that shape and constrain the daily life of heroin users". (3)

Figure 17.1

Faupel used this typology to explain the maintenance and breaching of the ethical standards of the heroin subculture by individual heroin users. An important finding of his research was that the careers of users who were able to uphold their ethical standards were not only characterized by a high availability of drugs, but also by a high degree of life structure. (3)

Faupel emphasized the regular activities (both conventional and drug use related) that structure daily patterns as key determinants of life structure. (3) It seems logical to include people's connections, commitments, obligations, responsibilities, goals, expectancies, etc.. Relationships and aspirations that are demanding, and simultaneously have value in social (e.g. affection) or economical (e.g. income) ways are equally important determinants of life structure. Regular contacts with controlled and non-users are therefore of considerable importance, as is participation in structures and activities not (primarily) driven by drug related incentives.

Life Structure and the Stability of Drug Availability

Faupel's findings suggest that, although a high drug availability is essential for the development of social controls, without a stable life structure it only offers them limited support. The importance of life structure is most clearly demonstrated by its absence as represented by the free-wheeling junkie (Figure 17.1). A sudden rise in availability of drugs or money --a big sting-- interferes with or undermines the daily, and largely fixed pattern of (both conventional and drug) activities, and may result in a sharp escalation of drug use. When then drugs and money are finished, the user very often finds himself in a worse position --habituated to a higher consumption level, while the connections required for a steady generation of income have been neglected. (3) The account of Assad in chapter 5.5 offers a perfect illustration.

Several recent Dutch studies documented a differentiated image of the heroin user that is only poorly compatible with the stereotype of the uncontrolled junkie. These studies indicate that the life structure of an increasing number of heroin users bears a considerable resemblance with that of their non drug using unemployed neighbor in terms of time allocation and social activities. (14 15 16 17) Many heroin users maintain a considerable number of non drug-related connections. Apart from family ties, one third to 40% share their housing with non-users (including partners), while one third to 40% of friends and acquaintances are non-users. (6 17) The typical (if one can speak in such terms) heroin user is \pm 30 years old and spends more time on watching TV, than on chasing drugs, while the main income source is the social security system. (5 6 14 18) Methadone forms the basis of the drug menu and the amount of drugs he uses is more determined by the available resources than vice

versa. (6 15) When involved in criminal activities he tries to uphold relatively high ethical standards characterized by a dislike of violence. (5) This depiction seems to represent the most common end phase of a long (> 10 years) heroin career and is significant for the aging population.

Using the concept of deviant career, Grapendaal et al. used the term normalized user for this type of user. In their study they furthermore distinguished the dealing user and the criminal user. Both these types used more cocaine and heroin than the normalized user. Their study suggest that the dealing user is a rather persistent type, while the criminal type is more often a phase preceding the normalized user -- at some point in the career this lifestyle becomes too demanding and the user calms down. (5) Another outcome may lead to a fourth type: the marginalized or down and out user, who lost the skills to make money, is often homeless, cut off from most former contacts, and troubled by intensive psychological problems begs other users for a mazzeltje (a taste) or searches the street for crumbs.

This picture is largely in line with the conclusion of 17.3.1. Maintaining the demanding life structure of the successful criminal is only reserved for a limited number of users, during a limited period of time. When the necessary skills and resources are exhausted, the user either retires or marginalizes. In the first case, self-regulation strategies increasingly depend on activities that help the user to abstain from or, minimize use of illicit drugs, supported by regular use of methadone. In the latter case, the conditions to do so are absent. The durability of the dealer type, at the other hand, signifies a comparably stable pattern of relatively controlled use of heroin and cocaine, as part of a highly structured entrepreneurial career.

Consumption level dealing can, indeed, be compared with any other small retail business, in particular with a small street or market vendor. Successful dealing is primarily a matter of good shopkeeping and obeys similar economic demands and rules. At the end of each day the small retailer must have earned the money to pay for his stock for the next day, the wages of employees, other business costs and the costs of living. When it was a good day or week, the surplus income can be invested or spent on luxury goods. This little entrepreneur must have a good sense of his financial position. So must the small dealer:

He counts the money and studies a list with numbers. Then he says,
"Well, we made a small profit after all now."

Such simple bookkeeping has been observed several times. Just as his fellow marginal, but less criminalized colleague the small dealer does not normally have large (financial) reserves and therefore small mistakes can have major consequences:

Harrie complains that business is going bad last days. "Yesterday we lost 400.- on the dealing. We forgot the scale so that I had to do the weighing without."

A few more mistakes and the dealer is out of business. A successful dealer works often on fixed hours, with a stable team of employees and keeps precise track of the financial balance. He can, for example, not afford himself to show up at the dealing place at random times, unless he has monopoly power. But this is not the case in Rotterdam. The Rotterdam consumption level market for heroin and cocaine is in essence an open market with considerable, but generally peaceful competition. Besides a certain degree of commercial skills, a product of reasonable quality and the will to sell on tick and give *betermakertjes* and *mazzeltjes* (tastes) to regular customers in need, successful entrepreneurship requires stability and continuity. Such stipulations substantially structure the time allocation of those successfully involved in dealing.

Rituals and Rules

Maintaining scheduled activities and fulfilling social obligations, etc. --thus maintaining a stable, high degree of life structure-- requires rather careful management of drug consumption and related activities. Such management is dependent on the development of, and compliance with, rituals and rules. (1) In The Netherlands, heroin users have developed rituals and rules to control the use of this drug in the course of twenty years of collective experience. Compared with the situation abroad, heroin users in The Netherlands experience relatively minimal repression. This, and the easy accessibility of the heroin substitute methadone, have been indispensable facilitators of the social learning processes that facilitate controlled drug use. Of course, this process has not been complete. A majority of the

users in this study still experience problems with heroin. One reason is that heroin remains a very expensive drug, inducing availability problems. Likewise, there are almost no models of controlled heroin use available. Furthermore, people are socialized into heroin use in the context of a subculture that was formed under more repressive and unstable conditions. The addition of other drugs to the daily use patterns also complicated self-regulation processes.

In particular, the nesting of cocaine in these heroin rituals disrupted the process to a considerable degree. But cocaine did not stop the pursuit for control. Adaptation to the changed pharmacological factor in Zinberg's concept (from heroin to cocaine) is a prominent feature of the current cocaine/heroin patterns. However, the combination of cocaine's pharmacology, high use frequencies and rapid delivery systems, results in subjective availability problems, which considerably burdens the adaptation process. It is therefore expected that the first signs of adaptation to cocaine will be found among users who have comparably easy access to cocaine and heroin, and a high degree of life structure.

Again, this points in the direction of users involved in dealing. Not only their position provides the conditions required for their development and maintenance (sufficient level of drug availability and the degree of life structure to maintain it on a steady basis), dealing also provides the incentive to comply with regulatory rituals and rules. Controlling one's drug use during working hours is a prerequisite for successful participation in the drug trade. Leisure time drug use may likewise not interfere with occupational stipulations and it must thus also be contained by similar social controls. Of course, not only their privileged dealing position enabled the Surinamese users to better regulate their drug use. Several, partly related, factors further supported stability. For example, Surinamese users often exert rather intense social pressure on each other to remain in control. (10 19) To a certain extent, social control is also exercised by non-using partners and family. (20) The Winti folk religion may add further restraints. (20) Thus, in particular in the domains of life structure and ritual and rules, Surinamese users experience additional controlling factors.

A Feedback Model of Drug Use Self-Regulation

The DARRLS-Trinity: Drug Availability, Rituals and Rules, Life Structure

The dealers' higher level of self-control can now be explained as an example of the interaction between drug availability, rituals and rules, and life structure. The high drug availability of dealers is evident. Regular involvement in drug selling also provides the necessary degree of life structure. Successful consumption level dealing is subject to similar economic demands and rules as any other small retail business. It provides the structured activity, while relating with customers, crew and wholesale suppliers engender demanding connections, commitments, obligations, responsibilities and expectancies. Thus, the stipulations of successful entrepreneurship structure the time allocation of those involved in dealing to a large extent. To maintain dealing activities successfully, the dealing user must regulate his personal use, so that it does not interfere with (the schedules and demands that contribute to) taking care of business. Such rituals and rules can only develop under the condition of sufficient drug availability.

Drug availability, rituals and rules, and life structure must thus be considered in coherence. The continuity of drug availability is dependent on the stability of life structure which results from rather strict compliance to the rituals and rules regulating patterns of drug use. Because availability is a precondition for the development and maintenance of regulating rituals and rules, the following hypothetical model can now be formulated:

Drug Availability, Rituals and Rules, and Life Structure are a trinity -- interactive factors in an internally coherent circular process, in which these factors are themselves modulated (modified, corrected, strengthened, etc.) by their outcomes. It is thus a 'feedback circuit' that determines the strength of self-regulation processes controlling drug use.

This model --the DARRLS-Trinity-- is graphically represented in figure 17.2.

Figure 17.2

Rituals and rules determine and constrain the patterns of drug use, preventing an erosion of life structure. A high degree of life structure enables the user to maintain a stable drug availability, which is essential for the formation and maintenance of efficient rules and rituals. Self-regulation of drug consumption and its (unintended) effects is thus a matter of a (precarious) balance of a circularly reinforcement chain.

External Determinants of the DARRLS-Trinity: Effects of Drug Policy

Although this feedback model is circular, it is not a closed and independent circuit. The three cornerstones of the feedback model are each the result of distinctive variables and processes. Drug availability is determined by price, purity and accessibility, which are mediated by market factors and governmental regulations. (figure 17.3) Rituals and rules are the product of culturally defined social learning processes. (figure 17.4)

Figure 17.3

Figure 17.4

The shape and degree of life structure are the product of the regular activities, relationships and ambitions which may be drug related or not. General socio-economic factors and actual living conditions, personality structure and the prevalence of (non drug related) psycho-social problems, and cultural factors may further determine life structure. (figure 17.5) Clearly, external stimuli can impact on the feedback system, in particular on its ability to support controlled and adjust uncontrolled use.

Figure 17.5

The social definition of drugs and their users, embodied in drug policy, can be seen to affect the model at all three cornerstones. Excluding alcohol and tobacco, most, if not all current drug policies are based on some degree of prohibition, rooted in criminal law. (21) Legalization is a term that is often used to represent the opposite of prohibition or the situation this term refers to. What is actually meant with the words prohibition and, especially legalization is not always evident. The words are often used in quite a holistic sense --not infrequently functioning as a smoke screen. The latter is then lumped together with related but distinct concepts such as decriminalization and normalization, whereas the former gets equated with the war on drugs. (21)

According to Webster's New World Dictionary (22) the word prohibition originates from the Latin word *prohibitio* and refers, besides to the 1920-1933 U.S. federal ban on beverage alcohol, to 1. "a prohibiting or being prohibited" and 2. "an order or law forbidding something to be done". The word is a derivative from the verb to prohibit, which Webster's describes as 1. "to refuse to permit; forbid by law or by an order" and 2. "to prevent; hinder". Prohibition forbids, or commands individuals to refrain

from, certain action or behavior. Drug prohibition commands people to refrain from the use of drugs, based on the premise that use of these substances is unacceptable. It is, however, obvious that a considerable number of people disagree with this point of view and consequently disobey such commands. In that respect it is clear that only the weaker connotation (to hinder) of the second meaning of the verb is applicable, as drug prohibition does not prevent drug use. Note that, although often implicitly assumed, prohibition is more a process than an unequivocal phenomenon, as both historically and geographically considerable variations can be found.

Legalization, or the L-word as it nowadays is often euphemistically referred to in American discussions on drug policy, also refers to a process: According to Webster's the term means "to make legal or lawful". The word is derived from the adjective legal which originates from the latin word *legalis*, meaning 1. "of, created by, based upon, or authorized by law" and 2. "in conformity with the positive rules of law; permitted by law". Legalization is thus a process that reacts upon and seeks to abolish the prohibition of drugs, which is perceived as a failing and counter-productive process. (23) Legalization is not the alternative or opposite of prohibition, but merely paves the way for alternative drug control policies, outside of criminal law, which are expected to be more successful. Beyond this, the term does not entail any information on the nature of such policies.

Clearly, both terms give rise to confusion and various interpretations. Drug prohibition does not necessarily mean a total war on drugs and legalization is not a synonym for free, uncontrolled availability of drugs --the terms do not represent a factual dichotomy and may, indeed, be merely expressions of the academic argot of the advocates of the competing perspectives in the drug debate. (21) Despite the preceding linguistic discussion, prohibition has come to symbolize the (variably enforced) illegal status of drugs, while legalization denotes the opposite state, in which drugs are legal. While this imposed dichotomy bears some obvious risks, it can serve the present investigation of the effects of drug policy on the DARRLS- Trinity, when its limitations are kept in mind. Therefore, figures 17.6 to 17.9 present such dichotimized representations of the continuum from prohibition to legalization.

Figure 17.6

Given the socio-political conditions of drug prohibition it is evident that availability is the weakest link in the chain as prohibition artificially limits drug availability. (figure

17.6) Prohibition may obstruct the possibilities for drug use to a certain degree, thereby limiting general prevalence. It has, however, been argued that this, so called, deterrence effect of prohibition primarily reinforces already existing anti-drug attitudes. (21) But prohibition induces a broad spectrum of reactions from users, aimed at circumventing its effects and provides the economic incentive for unregulated entrepreneurial ventures --prohibition turned drugs into a highly profitable commodity. While its aim is to make drugs unavailable, it has only created an uncontrolled availability. Overall the availability of drugs may be lower, but in situations, specific neighborhoods and sub-populations which are more susceptible drug availability is actually much higher. This may well be a main factor in the spread of drug use. (24 25)

Figure 17.7

Prohibition affects the formation of rituals and rules as it obstructs and interferes with natural social learning processes by which most aspects of social (appropriate) behavior are conveyed. (figure 17.7) The social controls that regulate substance use can be rooted in mainstream culture, as is for example the case with alcohol. The rituals and rules that sanction controlled alcohol use are mainly determined by general family centered (inter-generational) socialization processes, which offer socially acceptable models of alcohol use and reinforce moderate use. In the case of illicit drugs the efficiency of these primary socialization processes is severely damaged. As a result, rituals and rules surrounding illegal drug use largely depend on subcultural or peer group socialization, characterized by a larger emphasis and dependence on idiosyncratic and rigid rituals and only limited applicable rules. These rules and rituals will primarily reinforce those behaviors which constitute the *raison d'être* of the subculture.

Prohibition likewise impairs the life structure of drug users. (figure 17.8) The user must participate in criminalized drug-driven networks to secure a steady supply of drugs. In these social networks he will relate with uncontrolled drug users. An increasing part of the activities will be centered around the acquisition of drugs. Meanwhile, secret drug users must manage to live double lives, as prohibition fuels stigmatization and ostracism when users are recognized as such. (26) Once labeled a junkie (all drug users are junkies), other undesirable traits are automatically

attributed --criminal, unreliable, dishonest, pitiful, violent, etc.-- and this prevents and overrules the identification of more positively valued labels. (27)

Figure 17.8

This results in the reduction of connections with non drug users, as both parties experience stress in interacting. It also obstructs contacts between controlled users, as they all fear disclosure. (26) Public knowledge of drug use may even lead to disproportional sanctions -- losing a job or expulsion from school, denial of general (mental) health care and relegation to specialized care systems which are often combined with intense social control, eviction from one's housing, confiscation of possessions, imprisonment, etc.. The stigmatized junkie identity impedes participation in conventional roles and groups and progressively changes the lay out of day-to-day activities and the nature of relations.

It can thus be concluded that prohibition interferes with the natural processes underlying self-regulation. It generates and reinforces the stereotypical negative image (junkie, criminal, violent) and related behaviors, which are generally related to drug use per se. (figure 17.9)

Figure 17.9

Conclusion

It is evident that the use of intoxicants, even of those often referred to as hard drugs, does not inevitably lead to uncontrolled or harmful patterns of use. Just as with many other intensely pleasurable experiences, the use of intoxicants may become the predominating activity. Drug use is, however, rarely an isolated activity. Intertwined with many other aspects of life, it is normally a social activity. Drug use patterns -- which drugs people use and how they use them- - are subject to a multitude of social determinants, such as availability, trends and cultural patterning. Therefore drug use cannot be isolated from its social context. As Zinberg argued, control over the use of drugs is mainly determined by social variables. The presented feedback model of drug use self-regulation provides an interesting framework for the future study of the interactions between drug use behaviors and the factors that determine its social context.

References

1. Zinberg NE: Drug, set, and setting: The basis for controlled intoxicant use. New Haven: Yale University Press, 1984.
2. Harding WM, Zinberg NE: The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 111-133.
3. Faupel CE: Drug availability, life structure and situational ethics of heroin addicts. Urban Life 1987; 15(3,4): 395-419.
4. Toet J: Het RODIS nader bekeken: Cocainegebruikers, Marokkanen en nieuwkomers in de Rotterdamse drugshulpverlening rapport 87. Rotterdam: GGD-Rotterdam e.o., Afdeling Epidemiologie, 1990.
5. Grapendaal M, Leuw E, Nelen JM: De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan. Arnhem: Gouda Quint, 1991.
6. Korf DJ, Hogenhout HPH: Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drughulpverlening. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
7. Hoekstra JC: Handelen van heroïnegebruikers. Effecten van beleidsmaatregelen. Groningen: RUG, 1987.
8. Korf DJ, Kort M de: Drugshandel en drugsbestrijding. Amsterdam: Criminologisch Instituut Bongers, UVA, 1990.
9. Gemert F van: Mazen en Netwerken: De invloed van beleid op de drugshandel in twee straten in de Amsterdamse binnenstad. Amsterdam: ISG, 1988.
10. Janssen O, Swierstra K: Heroïnegebruikers in Nederland: een typologie van levensstijlen. Groningen: Kriminologisch Instituut, 1982.
11. Swierstra K, Janssen O, Jansen JH: Heroïnegebruikers in Nederland deel II: De reproductie van het heroïnegebruik onder nieuwe lichten. Groningen: Criminologisch Instituut, Rijksuniversiteit Groningen, 1986.
12. Gelder PJ, Kaplan CD: The finishing moment: Temporal and spatial features of sexual interactions between streetwalkers and car clients. Human Organization 1992; 51(3): 253-263.
13. Carlson KA: Identifying the stranger: An analysis of behavioral rules for sales of heroin. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 191-206.
14. Kaplan CD, Vries M de, Grund J-PC, Adriaans NFP: Protective Factors: Dutch intervention, health determinants and the reorganization of addict life. In: Ghodse H, Kaplan CD, Mann RD. (eds.): Drug misuse and dependence. London: Parthenon, 1990: 165-176.
15. Swierstra K: Drugscarrières, van crimineel tot conventioneel. Groningen: Rijksuniversiteit Groningen, 1990.
16. Korf DJ, Mann R, Alderen H van: Drugs op het platteland. Assen/Maastricht: Van Gorcum, 1989.
17. Korf DJ, Alderen H van, Hogenhout HPH, Sandwijk JP: Gooise Geneugten: Legaal en illegaal drugsgebruik (in de regio). Amsterdam: SPCP Amsterdam, 1990.
18. Korf DJ: Jatten alle Junkies? Tijdschrift voor Criminology 1990; 32(2): 105-123.
19. Grund J-PC, Blanken P: From 'Chasing the Dragon' to 'Chinezen': the Diffusion of Heroin Smoking in the Netherlands. Final Report. Rotterdam: Instituut voor Verslavingsonderzoek (IVO), 1993.
20. Gelder PJ van, Sijsma JH: Horse, coke en kansen: Sociale risico's en kansen onder Surinaamse en Marokkaanse harddruggebruikers in Amsterdam. I Surinaamse harddruggebruikers. Amsterdam: Instituut voor Sociale Geografie, UvA, 1988.

21. Wijngaart GF: Competing perspectives on drug use: The Dutch experience. Amsterdam/Lisse: Swets and Seitlinger, 1991.
22. Guralnik DB et al.: Webster's New World Dictionary of the American Language, second college edition. Cleveland/ New York: William Collins + World Publishing Co., Inc., 1974.
23. Nadelmann E: Impasse in drug policy: What are the options? Keynote address at the third International Conference on the Reduction of Drug Related Harm, Melbourne, Australia, 23- 27 March, 1992.
24. Hughes PH: Behind the wall of respect: Community experiments in heroin addiction control. Chicago: University of Chicago Press, 1977.
25. Hughes PH, Crawford GA: A contagious disease model for researching and intervening in heroin approach. Addictive diseases 1972; 2: 149-155.
26. Goffman E: Stigma: Notes on the management of spoiled identity. New York: Simon and Schuster, Inc., 1963.
27. Becker HS: Outsiders: Studies in the sociology of deviance. New York: The Free Press, 1973.

DRUG CULTURE AND DRUG POLICY: IMPLICATIONS FOR FUTURE DEVELOPMENTS

Contents

Introduction

Drug Availability, Ritualization and Culture

New Drugs, New Rituals, New Cultures: The Example of XTC

Prohibition: An Arbitrary Phenomenon

Dutch Drug Policy in Perspective

Revitalization of Dutch Drug Policy

Considerations for Future Research

References

Introduction

Traditionally, interest in the factual description of the behaviors involved in drug taking and the concrete social context in which these behaviors take place have been minimal. The advent of the HIV epidemic among injecting drug users (IDUs) painfully bore the consequences of this negligence. The present research, while not instigated by concerns for the spread of HIV, is certainly relevant to this issue. The study was directed at the indepth ethnographic description of the drug taking behaviors of regular users of heroin and cocaine. It aimed to reveal the functions and meanings of these specific behaviors for the individuals and groups involved in their regular use. Furthermore, the research examined the possible (public) health implications of the behaviors under study and this is where the connection with the HIV issue is made. In addition the research should shed some light on factors that determine (aspects of) these behaviors. In particular (social) factors that can be subjected to (policy) interventions were of interest. Thus, the project started with fairly general research questions, which have been specified along the analytical process (1) to those presented in chapter 3.2.

A fundamental assumption of this research has been that, while the studied behavioral sequences have a functional basis, their functions and meanings extend beyond this pure instrumental functionality. The observed behaviors were thus

expected to serve specific instrumental functions in the process of procuring drugs and introducing these into the body, as well as symbolic and social functions and meanings, both for the individual performers and their social networks. These complementary perspectives have been operationalized using the concept of ritualization. Chapter two provided an overview of the literature concerning ritual, its application in studies of drug use behaviors and of the factors that can be regarded as conditions of ritualization. This overview suggested a combination of economic (scarcity) and socio-cultural (subculture) factors as a main determinant of ritualization around drug taking. It furthermore suggested that these same factors are also of central importance to the issue of self-regulation, i.e. whether drug use is controlled or uncontrolled.

Thus, the present study took a microscopic look at the daily drug taking rituals of regular users of heroin and cocaine and described the functions and meanings of these drug administration rituals in terms of pragmatic utility and social effects, e.g. group coherence. As the study went along, the importance of the concept of availability became increasingly clear. The preponderant influence availability plays in the daily lives of the study participants is perhaps the most conspicuous and consistent finding of the study. Actually, this is neither surprising, nor new. A serious contention is that the reduced availability of drugs resulting from prohibition constitutes the essence of the drug problem society currently faces. (2 3 4 5)

Whereas ritual is the basic element of culture, this final chapter will address the impact of reduced availability on the level of the compound --the drug using culture itself. It will attempt to reveal some of the general processes involved and for that reason this discussion will not be limited to heroin, but also consider the cultural developments around two other drugs -- cannabis and MDMA. The current state of affairs of Dutch policy will be assessed for its impact on the developments around these different drugs. The ultimate aim of this chapter is to explore new directions for drug policy and practice, building on the successes of the Dutch normalization policy.

Drug Availability, Ritualization and Culture

Drug Availability: A Decisive Factor

Availability is at the root of individual choices for either chasing or injecting. Many of the observed transitions between administration rituals (see chapter six) were related to availability problems. Availability has also been a main determinant of the subcultural transition from injection to chasing as the dominant administration ritual for both heroin and cocaine. The combination of a stable and relatively high heroin quality on the Dutch illegal drug market and the easy availability of methadone provided an essential condition for the chasing ritual to thrive. (6) Availability can also play a role in cocaine related problems, such as loss of control and the initiation of injecting (chapters five and six). Cocaine's intense, but short lasting euphoric effect and the subsequent crash often result in high frequency administration schedules of sometimes every twenty (or less) minutes. Thus, while it may be just as easy to purchase as heroin and sold for approximately the same price per unit, the subjective or perceived availability of cocaine is for most of the observed users much lower than that of heroin.

As a result of the generally unrestricted availability of syringes and needles, standardized needle sharing patterns have not developed in the Netherlands, preventing the addition of special meaning to such acts (chapter thirteen). As a result, most IDUs perceive needle sharing as an inexpedient, or even deviant act. This does not mean that needles are never shared. But in the few observed cases of needle sharing a strong link with situational (un)availability of needles could be established (chapter twelve). In contrast, standardized drug sharing patterns did develop, as a result of a structural low availability of the drugs preferred by the research participants. Drug sharing was found to be highly ritualized and surrounded by elaborate subcultural rules (chapter nine). Sharing drugs is of course not limited to the participants in the present study, but rather a common feature of many formal and informal gatherings within various social groups. Both from a historical and a geographical perspective there are probably few societies where drugs do not play, or have not played, a role in social ritual. (7) Illegal or not, sharing drugs brings people together and strengthens their mutual ties. Therefore, it was argued that drugs have intrinsic or primary ritual value. But, whereas drug use and social ritual have a strong and historical relationship, the significance attached to the drug

sharing ritual by those involved --the intensity of ritualization-- varies with the availability of the drug. While there is little principal difference between offering a guest a cup of coffee, a cigarette, a beer, a cannabis joint or a taste of heroin --all are directed at smoothening interactions (8 9)-- the social meaning of the latter is of a much larger magnitude.

Clearly, drug availability plays a crucial role in the construction of this social meaning. Submitting drugs and their users to economic and social repression, with the inevitable result of a reduced drug availability beyond the users' control, can be seen to have a series of definite consequences:

1. It increases the economic value of the drugs. Increased economic value not only works as a strong stimulus for the formation of an illicit market intertwined with a subculture of users, but also translates into economic pressure towards more efficient administration rituals.
2. It increases the ritual value of the drugs, which turns the ritual object and its utilization into an attractive and effective symbolic object of subcultural identification.
3. Reduction of drug availability furthermore induces uncertainty about the probability of obtaining the ritual object, and thus about whether the ritual event may take place. This promotes opportunistic (unsafe) use patterns. Because the reduction of uncertainty and anxiety is a main function of ritual this uncertainty further increases the significance of the ritual performance. (10)

The overall result of these developments is a narrowing of focus and interest, as well as a severe reduction of behavioral expressions of the users. They will direct the major part of their activities towards realizing the performance of the drug use ritual. They will fixate on and cling to its undisturbed performance and the ritual will be narrowed down to its core functions --getting high and safeguarding this activity. This process not only has an impact on the individual users, but also determines the norms and orientation of the subculture.

Availability and Cultural Orientation: Survival or Progress

In his analysis of peasant life, John Berger provided an interesting framework which reflects the dynamic relationship of ritualization and availability and its impact on culture. Peasant life shares some remarkable similarities with that of the drug users reported on in this dissertation. The peasant is committed completely to survival and "whatever the differences of climate, religion and social history, the peasantry everywhere can be defined as a class of survivors". (11) The peasantry is a self-supporting economy within an economy which makes it, to some degree, a class

apart on the frontier of the formal or mainstream economic-cultural system. "They maintained or developed their own unwritten laws and codes of behavior, their own rituals and beliefs, their own orally transmitted body of wisdom and knowledge, their own medicine, their own techniques and sometimes their own language." (11)

Peasants and drug users share a decisive economic consciousness which determines their actions and can result in a highly opportunistic attitude. But in order to survive, they must resort to "mutual fraternal aid in struggling against ... scarcity and a just sharing of what the work produces". "When peasants [and drug users] cooperate to fight an outside force, and the impulse to do this is always defensive, they adopt a guerrilla strategy --which is precisely a network of narrow paths across an indeterminate hostile environment." (11) As with the drug subculture, the peasantry's relation to the dominant culture, can therefore be characterized as heretical and subversive. These analogies are even reflected in their similar reputations. The drug users' equivalent of the peasants' "universal reputation for cunning", (11) is portrayed in terms such as "extremely egoistic cannibals" who "lie, steal and manipulate their fellow human beings" due to a "junkie syndrome". (12 13)

Figure 18.1

The essence of peasant life, Berger explains, is dealing with scarcity (hunger) and insecurity, without prospect of improvement, by following a narrow path of tradition. "A class of survivors cannot afford to believe in an arrival point of assured well-being. The only, but great, future hope is survival." (11) Peasant culture can therefore be described as a culture of survival. "A culture of survival envisages the future as a sequence of repeated acts for survival. Each act pushes a thread through the eye of a needle and the thread is tradition". (11) In other words, in dealing with reality and the future, one relies on the repetitive and routine performance of a specific class of practices. Exactly those practices that have demonstrated, time after time, to (temporarily) alleviate scarcity, and bring about survival of both the individual and its culture (see figure 18.1). Beyond survival only uncertainty exists, as this falls outside of one's control. Berger contrasts the culture of survival with, what he calls a culture of progress. "Cultures of progress envisage future expansion. They are forward looking because the future offers ever larger hopes. ... The future is envisaged as the opposite of what classical perspective does to a road. Instead of appearing to become ever narrower as it recedes into the distance, it becomes ever wider" (see

figure 18.2). (11) The resulting spectrum of feasible and opportune behaviors becomes more diverse, while their ritual value decreases.

Figure 18.2

A cultural continuum

While Berger presents the two cultures as a dichotomy, mirror opposites of one another, the accuracy of this representation is questionable. Culture is probably more veraciously envisioned as a continuity, a flow from past to future, in which the labels survival and progress represent reversed positions which depend on availability (see figure 18.3).

Figure 18.3

In periods of scarcity the culture goes back to the basics and refrains from activities which surpass the biological goal of survival, whereas in periods of plenty activities diversify and the goal of survival becomes more remote. Inevitably, this has important consequences for the daily activities and commitments and thus for the life structure of those involved. With regards to pattern and function of rituals (and rules) one can observe in periods of scarcity a declining number of participants in the ritual with closer connections, and an increasing meaning attached to the ritual object and the (undisturbed) performance of the ritual. In contrast, in periods of plenty the number of participants (with less intimate connections) increases, while the meaning attached to the ritual object and to participation in the ritual decreases. Ultimately the ritual object becomes de-ritualized and stops being the instrumental imperative (14) of the culture, which itself has progressed into a stage of dissolving into a larger culture.

An illustration: The Dutch Cannabis Culture

An interesting illustration of this process is found in the recent history of cannabis use in The Netherlands. While cannabis use was not unknown before, during the 1960s the drug became more widely available in the upcoming middle class hippie subculture. (15) This counter-cultural movement was experienced as a serious threat, not only because of its illegal drug use, but also because it questioned the establishment. In response use of cannabis (and other drugs) was problematized and repressed. As a result, smoking cannabis became a symbolic act of resistance, invested with symbolic meaning, uniting adolescents and young adults, who shared the hippie philosophy of life. The fact that use and consumption dealing of cannabis became a focus of law enforcement only reinforced this process. Elaborate smoking

rituals could be observed (dimly lit rooms, specific music, candles, incense, sitting in a circle passing the water pipe, chillum, or joint, etc.). The drug was surrounded by a detailed argot, which leaned heavily on imported American slang.

The contra-productive effects of repressing cannabis use were quickly recognized in the early 1970s and a more tolerant policy developed. With the revision of the Dutch Opium-act in 1976, possession of cannabis for personal use (30 grams or less) has been decriminalized in the Netherlands. Since then the availability has increased considerably as an open coffee shop based market developed. Nowadays, use of cannabis is no longer associated with a deviant subculture, while the hippie subculture was absorbed into mainstream society during the 1970s. Ritualization has decreased significantly and rapidly. Smoking cannabis is almost completely normalized in the Netherlands and users can be found in most social strata. (16) One can smoke a joint in most public environments without risking police harassment. Cannabis has become readily available and is sold in semi-legal, so-called, coffee shops --to the Dutch more and more a normal offshoot of the retail branch, for many foreigners still a strange novelty and a tourist attraction. (17 18) The Dutch generally mix cannabis with tobacco, while more potent ways of administration (water pipes, chillums, hot knifing) have become obsolete. Using a roach clip to hold the butt as it burns down, and saving and rerolling the butts --a typical American ritual-- is unknown among Dutch cannabis users and considered an oddity:

"An American friend who visited me recently, offered me this little plastic bag as if it was an important present." He shows a little zip-lock bag, containing four to five grimy reefer butts. "He said he did not dare to take them on the plane home. It seemed he had a hard time forsaking them. I kept the bag as a funny, but dirty, memento."

The marihuana leaf, which, featuring on clothing and jewelry, used to be an explicit style symbol of cannabis users in The Netherlands, has not disappeared, but it has diffused to many non-users, thereby losing its ritual binding force. (19) This does not mean that all ritual behavior surrounding cannabis use has ceased to exist in Holland. It may well be observed among new, inexperienced users, most likely in the period during and shortly after initiation. After all, rituals have an important educational function. (20) Likewise, many experienced users perform and enjoy

idiosyncratic rituals when making a handsome and perfectly smoking joint. But the functions of these stereotypical behaviors have changed. Little symbolic elaboration remained, while social goals have faded. The remaining solitary rituals are principally practical. They focus at the task at hand and prepare the user for getting high. Once of great importance, many symbolic behaviors have lost their function --they have become "empty rituals". Nowadays, the social symbolic meaning of sharing a joint largely parallels that of sharing a tobacco cigarette.

Back to the Heroin Culture

The cannabis example provides an indication of the different ritual patterns determined by varying levels of availability associated with social and economic pressure. While similar variations in the intensity of ritualization in the heroin culture are often not so clear cut, a comparison between Rotterdam and the Bronx (chapter sixteen) established several differences in ritual patterns, especially around use and consumer level transactions, which underline the significance of availability. Within the Dutch heroin culture itself such variations can also be observed. Although the overall frequency of drug sharing in the two groups differed little, the drug taking and sharing rituals of many (older) IDUs seemed considerably more formalized than those of chasers. Sharing among chasers generally took a casual and opportunistic form, while IDUs' drug sharing seemed confined to smaller circles, epitomizing stronger social bonding. The subcultural transition to the softer and less harmful chasing ritual is perhaps the strongest indicator of the power of availability. (6) The sequential and gradual character of chasing results in a rather stable intoxication, which limits the contrast between being sick and high (nodding), characteristic of injecting. A contrast, which perhaps is important in explaining loss of control. (21) The absence of this compulsive contrast, in turn, limits the importance of, and fixation on, the event. Other behaviors become more feasible and the overall behavior pattern is less directed at survival.

The Dutch Heroin Culture: A Culture in Transition

Thus, in terms of the above suggested cultural continuum, the Dutch heroin culture can be envisaged as being in transition --from a culture of survival (of which it still has many aspects) to a culture of progress, in which the heroin ritual is loosing much of its symbolic power. In a true culture of progress the drug may still be used, but instead of becoming the paramount determinant of behavior it will be part of a

diversified pattern of behavioral expressions. In such a pattern heroin use is challenged and balanced by other determinants of behavior, fostering self-regulation processes that support controlled use. Little research has been conducted into this cultural transition hypothesis. However, one English study suggested lower dependency levels associated with chasing. (21) Likewise, the higher degree of self-regulation among (Surinamese) heroin/cocaine dealers reported in the previous chapter and the subcultural transition from injecting to chasing in the Netherlands (6) are also in line with this hypothesis. Furthermore, anecdotal observations of the relative ease with which later generations of heroin users seem to (permanently) kick heroin, (22) and the recent anecdotal reports from Amsterdam on controlled heroin smoking among young Moroccans (23) also point in the hypothesized direction.

New Drugs, New Rituals, New Cultures: the Example of XTC

The Cultural Setting

The recent emergence of MDMA (XTC or Ecstasy) provides an interesting example for comparison, as it is not yet contaminated by the influence of years of drug policy. While in the Netherlands the drug was not completely unknown before, in 1987 MDMA use emerged on a larger scale. Although also used in other (private or (semi-)therapeutic) settings, the use of MDMA has mainly been associated with the youth culture that has formed around house music, or shortly House. This new style of dance music originally emerged about 10 years ago in the Chicago gay scene and has developed into a highly successful international music scene. Just as Rock and Roll and Punk, House rebelled against the established (popular) musical culture and induced international cultural change far beyond the music. Its influence is noticeable in fashion, art, architecture and the socio-political attitudes of large groups of adolescents. In the beginning of 1987 House became popular within the incrowd of Dutch clubbers, and rapidly became popular in larger groups of young people. As the introduction to a recent Compact Disc release explained, "House is made for the dance floor, with sizzling rhythms, pumping basslines and little or no melody. ... People are going wild to extreme dance music, dressing extravagantly and having a wicked time." (24) "House Parties" or "Raves" are all night dance events that emphasize a total dance environment using state-of-the-art disco high technology (light-shows, stroboscopes and smoke machines). (25)

Whether on MDMA (or other drugs) or not, attendants may experience a "good" party as a revitalizing ritual. The Dutch musicologist and House musician Gert van Veen described House as follows:

"It is a musical experience that goes back to primeval age. Music as magic, as a means to reach a higher state of consciousness. The dance marathons are a ritual, in which the disc jockey acts as a wizard. Records are the ingredients of his hallucinating potion, with which he leads his audience to a liberating catharsis." (26)

At some parties visited in 1989 turn table wizards carefully controlled the atmosphere at the dance floor and they were able to incite communal maslowian peak experiences in which the whole dancing crowd turned wild --squealing, blowing whistles and laughing. (27) Upon his first introduction to a dancing and sweating crowd at a House Party, Bilu, a civil engineer from Kenya said "Man, this is tribal!". (28) And indeed, a house party does resemble a tribal celebration. Furthermore, the house tribe carries its own specific style symbols, e.g. clothing and jewelry, which are remarkably similar to those of the 1960s hippies. The tribe has also developed its own argot. (29 30)

The Drug and its Users

The use of MDMA spread simultaneously with House. A development which may well be stimulated by the extensive media hype, connecting the two. (31) MDMA has reached both new users with minimal or no drug experience and users with a varied experience with other illegal drugs. Both groups mix in the modern entertainment circuits. (25 31 32) In 1992 it was estimated that in Amsterdam approximately 10.000 people have ever tried the drug. (31 32 33) MDMA is now sold in various, at consumer level separated, markets (night clubs, discotheques, friendship groups pooling money) but is also part of the (tourist) street poly drug markets of Rotterdam and Amsterdam. Generally, the drug is orally ingested and its use has not yet been a reason for alarm. (25 31 32) Was the drug previously imported into the Netherlands -- e.g. from the USA-- large busts in February 1992 and subsequent periodical publications indicate that the (illicit) Dutch amphetamine industry has broadened its market share and is producing large quantities of MDMA, which for a large part is intended for the seemingly ravenous British consumer market. (34 35) Recent

anecdotal reports suggest that the incidence of MDMA use is still rising, while the drug has become accessible to new user groups. Drugs such as "magic mushrooms", LSD and amphetamine may also have gained in popularity, but it is too early to speak of a definitive trend. (36 37 38)

Interestingly, while drugs play some role of importance, House is not a closed drug centered subculture in the Netherlands. Although there is a cultural core of House Freaks, almost all social groups are represented at parties. (25 31 32) The key identity indicator of the cultural core is not the drug, but the music and perhaps the fashion. The common denominator seems to be the lust for endured trance dancing. Heterogeneity is also typical for the Dutch XTC users. Most users are in their twenties and thirties, have urban lifestyles, comparably high education levels and seem well tied in non drug dominated networks, activities and interests, such as work or study. (31 32)

XTC and Self-Regulation

Observations of XTC use of the last three and a half years indicate that the controlling strategies applied by XTC users initially leaned heavily on rather strict and idiosyncratic group rituals. But surprisingly rapidly these rituals seem to have been replaced by more generally applicable rules. (39) Adelaar suggested that users with prior illicit drug experience apply this experience to regulate smoothly their XTC use, whereas virgin users apparently find more difficulties in doing so. (31) Apparently, these experienced users adapt established and internalized rules to a changed (drug) situation, which seemingly gives them an advantage over users, whose MDMA use is the first experience with illicit drug use. Harding and Zinberg described similar processes among cannabis users in the USA, who adopted alcohol rules to their marihuana use. (40) Drug information programs are regularly approached by (potential) users in search of information about XTC. In response, the Amsterdam Jellinek Center and the National Institute on Alcohol and Drugs (NIAD) have both produced folders with objective and balanced information about the drug, including rather specific instructions for safe use. From a harm reduction perspective, this is a most sensible approach.

Considered in terms of the feedback model it can be assessed that the level of repression of XTC consumers and consumption level transactions has until now been rather low, resulting in a comparably high availability. XTC can be purchased at a

reasonable price without much difficulties, or intensive involvement in criminal subcultures. This allowed for the development of rituals and rules aimed at safe and controlled use instead of concealing and safeguarding the use of the drug itself, for example through the formation of a closed subculture. Moreover, information on XTC and instructions for safe use are available not only via peer communication channels but also from established institutions. The drug has even been a regular topic in the pages of *Achterwerk*, a national radio and television weekly's readers' mail feature for children and youth. In this, alongside letters about e.g. familial conflicts, friendship, sexuality and pets, experiences with and opinions of the drug, are openly discussed. This has greatly facilitated the formation, and widespread acceptance of rules for safe use. The degree of life structure of most current XTC users seems to be relatively high and largely determined by non drug related contacts and activities. XTC is mostly taken within the confined context of recreational activities --whether this is at a House Party or at home with friends-- and part of a differentiated pattern of activities. In comparison with the heroin culture, the Dutch XTC culture (if one can speak of one) is a culture of progress. While the drug is an ever interesting conversation topic (price, contents, effects), this is merely recreational dope talk and only one of the many subjects when users meet. The drug is not the instrumental imperative (14) of the house culture, but merely an adjunct in a rather hedonistic pursuit of pleasure and social identity. Given the conditions set by Dutch drug policy, this situation was not really unexpected. (40 41)

At this point three Dutch drug cultures have past in review. The cannabis culture, which basically has ceased to exist. (42) The heroin culture, which is becoming less oriented at survival and differs explicitly from its foreign counterparts on some important parameters. While there is little research available for thorough comparison, (41) it seems that the Dutch XTC culture is significantly more integrated in mainstream society than, for example in the United Kingdom. In Britain ravers are driven into an underground subculture, while the prevalence of XTC use has increased much faster than in Holland. British XTC users seem to have much higher use frequencies and taking several tablets a night is not exceptional. (43 44) Sensationalistic media accounts suggest a high rate of problems, (35) while at least seven deaths have been associated with XTC use. (43) Apparently, the UK does not provide a climate in which rituals and rules for safe and controlled use can nurture.

Although several British drug information centers aim to stimulate this process with sensible, well designed education campaigns, based on harm reduction principles (44), the following explanation of a British clubber in Amsterdam indicates that such efforts have to compete with repressive law enforcement, a tradition of poorly managed alcohol control and an, almost unanimously, sensationalist media discourse: (35)

"In London, it's like in the pubs shortly before eleven. Everybody tanks up before it is too late. With E it's just the same thing, lad. You better pop'em now, while you're having a good time. You may not get another chance. Tomorrow this thing may be all over, but who cares about tomorrow. Hear me? That's what I like about coming to Holland. Here people can have fun without the coppers chasing you, there is time to chill out. Take a break, you know. Here, ... people care about tomorrow."

Prohibition: An Arbitrary Phenomenon

These different cultural climates are the result of a dynamic societal interplay of forces, such as economic interests, (geo-)political priorities, social definition, (collective) social learning, (historical) development of social regulatory processes, scientific knowledge, which can all differ per country. The outcome of this process is, of course, subject to change and may be taken as an expression of the human ambivalence towards the use of psychoactive substances. In spite of international (UN) treaties, there is no global agreement on which drugs are, or are not, acceptable. Nor has there been one at any given time. Furthermore, societies may change their opinions on certain drugs over time, and have, in fact, done so often. (45) From a historical perspective, drug prohibition is a relatively recent, but also arbitrary phenomenon. On the other hand, tobacco, coffee and alcohol have all known periods of prohibition or, at least strong moral disapproval. Louis XIV banned tobacco sales and pope Urban VIII excommunicated its users. (46) In some countries draconian punishments were introduced, e.g. the slitting of nostrils in Russia and the death penalty in Turkey. (7) In 17th century England, coffee was considered a dangerous drug and outlawed. (46) For many people the word prohibition is

synonymous with the US' ban on alcohol at the beginning of this century. The following quote from Robert Hughes' *The Fatal Shore*, depicting life on a hulk (a 19th century English prison ship), not only provides a historical illustration of the variable process outcomes, but also presents a fine metaphor of the human ambivalence regarding drug use.

"I cannot help it, sir," he would say to the Captain. "Then I will cut the flesh off your back," the Captain would reply, and indeed the Boatswain used to do his utmost, for stepping back a couple of Paces he would bound forward with his arm uplifted, take a jump and come down with the whole weight of his Body upon the unfortunate victim, at every Blow making a noise similar to a paviour when paving the streets. At length the poor fellow (as I often heard him say) became weary of his life. He found that his blameless conduct in every other respect could not save him from the consequences of this trifling breach of discipline ... and from being one of the best he became the worst character in the Yard. When I left it, he was in the Black Hole for having bitten off the first joint of the finger of Mr. Gosling the Quartermaster, who had put it in his mouth to see if he could detect any Tobacco. (47)

The quote shows the great value people attach to the use of intoxicants and the trouble they are willing to undergo to maintain established use patterns when availability is restricted and use repressed. As Hughes wrote,

[t]he great emblem of desire and repression in hulk life, more than sex or food or (in some cases) freedom itself, was tobacco. Possession of tobacco was severely punished, but the nicotine addict would go through any degradation to get his "quid." Silverthorpe noted how this cycle of addiction and flogging broke prisoners down: "They grow indifferent ... they go on from bad to worse until they have shaken off all moral restraint." (47)

Under such repressive conditions, the use of a desired substance gains a symbolic merit for the users, while to the non-users it becomes a metaphor of debauched evil. Then drugs truly become "herbs of heaven and hell". (46 48)

None of the bans on the currently legal drugs were successful in convincing users to abstain and all were overturned, but not before black markets were created and flourishing. Nowadays these intoxicants are legal and their use is regulated within a lawful context. Nevertheless, their use is not without risk. (5 49) Coffee, as well as alcohol and tobacco, however, have become indigenous to (Dutch) culture and fulfill a multitude of positive social functions. The large majority of users consume coffee and alcohol in a controlled fashion. Perhaps because tobacco was until recently promoted as a safe drug, many users are addicted. Still, the use of this drug does not lead to the profound social misery, which is automatically associated with, for example, heroin. Apparently, users have learned to balance the positive and negative effects of these drugs. Aware of the detrimental nature of excess, use patterns have largely voluntarily been subjected to implicit and explicit social controls --rituals and rules, which display and define appropriate human behavior and are part of normal human socialization processes.

Regulating these drugs within a lawful context acknowledges that they fulfill essential biological and social functions for the human species. Of course, these functions are not restricted to the use of currently legal substances, but merely an expression of an ubiquitous pattern. As the American psychopharmacologist Ronald Siegel expressed it concisely, "[w]e need intoxicants, because the need is as much part of the human condition as sex, hunger, and thirst. The need --the fourth drive-- is natural, yes, even healthy. To say No is to deny all that we are and all that we could be." (7) Therefore, society needs to accept that drug use in itself is not a detrimental behavior or an expression of deviance, but a structural and normal phenomenon with a permanent character. The choice of drugs available, however, has increased significantly over the last 25 years. Through the internationalization of culture -- whether in person (through faster and cheaper travel possibilities) or through the increasingly faster mass communication media-- around the world, people have become aware of prior unknown options. (50) Drugs are not exempted from this ubiquitous trend towards a global culture. Interpreting Entzinger's recent remarks on the phenomenon of immigration, one can argue that "[o]nce [drug use] is accepted as a given, it is of

great importance to work towards a positive outcome --for the [consumer], as well as for the receiving society." (50) Drugs are here, and they are here to stay. Society must thus learn to live with their use, minimize the harm of use and turn it to its benefit as much as possible.

The following sections will investigate how the Dutch have tried to apply (certain aspects of) this line of thinking in dealing with the use of illicit drugs. After a brief sketch of its assumptions some results and the current state of affairs will be discussed. Subsequently, recommendations for future policy will be presented.

Dutch Drug Policy in Perspective

"Society will need to learn to cope"

Drug problems first developed in the Netherlands in the second half of the 1960s. Before, use of illegal drugs was not completely unknown, but was limited to specific sub-populations and not considered a real problem. (51) Already in the early 1970s it was recognized that a single repressive approach to drug use would create more problems, than it solves. (52) This recognition resulted in the development of the normalization policy --a drug policy rather distinct from those in most other countries. This policy --a mixture of pragmatism, compromising, down-to-earthiness, strategic planning, but also of trial and error and maybe a little luck-- is, however, an example of the general principles of Dutch social policy making and mirrors policies on related social and moral matters, such as homosexuality or abortion. For that reason some observers have referred to the Netherlands as an "advanced and sophisticated society, a societal testing station, a laboratory for moral and social topics". (53) The basic assumptions of the normalization policy were formulated in the beginning of the 1980s. The policy is mainly directed at the problematic use of illegal drugs and the management of drug related problems. (54) Acceptance of the permanent character of the presence of drug use implicates that "society will ... need to learn to cope with the dangers they pose". (55) Therefore, the prevention of problematic drug use and drug related harm has been given priority over the prevention of drug use per se. In strong contrast with repression and social ostracism, the key features are "encirclement, adaptation and integration". "Although Dutch drug legislation is still a part of criminal law, it is generally considered as an instrument of social control, the results of which should be assessed with each case, and it should not be considered

as a mouthpiece for passing moral judgment." (54) The penal approach is made subordinate to the public health goals. An important goal of the policy is to de-mythologize drug use and the junkie status. To take away the special meaning attached to drug use, users should not be treated as criminals or dependent patients, but as normal citizens who are capable of taking sensible decisions and respond to normal demands and opportunities. (54)

Some Results

The low level of policing of individual use and consumer transactions of illicit drugs -- an important cornerstone of the normalization policy-- has resulted in a rather steady availability of a variety of illegal drugs, in particular in the large cities. Increased availability of drugs is often thought to affect consumption by increasing the prevalence of use. (56) It is therefore interesting to see if Dutch policy has resulted in increased use prevalence. Several recent household surveys documented the use prevalence of both licit and illicit drugs. The following table presents an overview of household surveys conducted in Amsterdam, (16) a suburban area (57) and a rural community. (58)

The table shows that the use of illegal drugs in metropolitan areas is higher than in suburban and rural areas. This has been related to typical urban lifestyles --young one and two person households, who frequently make use of entertainment and cultural facilities, such as (movie-)theaters, discos and clubs. (16) Controlled drug use is often an integrated feature of such outgoing lifestyles. In Amsterdam the same instrument was administered in 1987 and 1990. Of the differences found in Amsterdam between the two years, only the reductions in the use of tobacco and sleeping pills are statistically significant. All other differences are not. Thus, while drugs are comparably easy to procure in Amsterdam, these data indicate a stable use prevalence over time. This suggests that the normalization policy did not result in increased use of drugs. (16)

It is furthermore interesting to explore how users outside the typical heroin using population regulate their drug use. Of particular interest is, how these users handle the comparably powerful psycho-stimulants cocaine and MDMA. In 1990 the Rotterdam Consultation Bureau for Alcohol and Drugs (CAD) registered 1537 client contacts (alcohol: 747; drugs 790). In 66 cases, this concerned people whose primary drug was cocaine and 42 of these were new contacts (heroin users are

excluded). In 1989, 53 people (45 new contacts) presented themselves with a cocaine problem. In 45% of these cases cocaine was part of a multiple drug use pattern, mostly combined with alcohol or cannabis. (59) With a recently estimated 12.000 cocaine users in Rotterdam, these numbers are hardly alarming. (60)

Table 18.1

Systematic data on MDMA related treatment applications are not available. In Rotterdam and Amsterdam people often request information about MDMA. In Rotterdam, the number of XTC related treatment applications is estimated at one a month or less. (61) XTC related treatment applications in Amsterdam were inventarized by Adelaars. Until autumn 1990 he found none. (31) This does not mean that the use of cocaine and XTC is completely without problems. For example, most subjects in a recent cocaine study by Cohen reported experience with craving and other negative effects of cocaine. (62) A recent XTC study by Korf et al. reported similar findings --many of their subjects have experienced a range of unpleasant effects during or after MDMA use. (32) In both Cohen's cocaine study and the XTC studies by Adelaars and Korf et al. these unpleasant effects were generally related to periods of high use levels. (31 32 62) A consistent finding in all three studies is that when people experience problems with the use of cocaine or XTC, they decrease or (periodically) discontinue their use. As Cohen writes: "Many indications were found that experienced cocaine users controlled their use ..., there are no indications that [this] group lost control and developed into compulsive high level users with a marginalized life style in order to support drug consumption." (62) All three studies described elaborate self-regulation strategies. Thus, while experience with the negative effects of these drugs is not uncommon, only few users apply for treatment and use patterns are subjected to social controls.

The normalization policy has been exceptionally successful in the case of cannabis. In practice both possession and consumer level transactions have been de-facto decriminalized. As was discussed above, the subculture that initially surrounded the use of this drug has completely dissolved, while the table shows that the prevalence of use has stabilized at a moderate level. (63) It can be concluded, that the normalization policy, which characterized the 1980s, has been a major factor in the stabilization and control of the drug problem in the Netherlands. It must be

emphasized that in particular the restrained and astute approach of the Dutch police has been of crucial significance.

Some Unresolved Matters

Not surprisingly, the normalization policy has not been a 100% successful. While the Dutch heroin culture is rather stable and easy-going, with comparably little accretion of novice users, (57 58 64 65 66 67) policy has, for example, not prevented the formation of a shunted off residual group of marginalized and demoralized users, whose needs are poorly served. Over time, problematic drug users have changed from rebellious white middle class youth to immigrants, illegals, psychiatric patients and long term prospectless skid row users. The drug treatment and care system has become a repository in which various groups with many different problems are dumped. (68) Whatever the background and make up of their problem, merely based on one aspect --uncontrolled drug use-- individuals are relegated into a system that at best offers treatment or maintenance of the symptom which has been marked the defining feature.

Methadone, which in itself plays a very important and beneficial role in the Dutch approach, is generally dispensed in large scale programs, in which management, automation and registration goals are equal to, if not higher than provision of practical health care and social services. Many heroin users in the field study experienced the treatment in these programs as infantilizing and intrusive of their private lives. Often social control objectives dominate staff- client interactions and clients are treated as patients, whose motives are routinely distrusted. Many individuals have been subjected to this treatment system for ten years or more. One could say that they have become dehumanized commodities of professional treatment networks --the legal branch of the "heroin structure". (69) Beninger referred to this practice as the "trafficking in drug users" (70) --another example of post-modern institutionalization. (71)

In a way, program staff are caught in the same system --tired of playing the intrinsic power games (e.g. around methadone doses), they experience their work as burdening, repetitious, little challenging and unsatisfactory. Their job does not bring them much prestige. A recent survey among the staff of the Amsterdam Jellinek Center showed that 40% is looking for other jobs because of the massive workload (72) and burn-out is a frequent phenomenon. Working in the same position for many

years, a considerable number of drug workers are under-educated and have a low market value on the job market. (68) Instead of quitting their jobs, they make their hours, but adjust their efforts downward. Their perception of their client group is often very negative and frustration is projected on clients leading to rigid and sometimes haphazard enforcement of disempowering program rules. This contributes to tension between staff and clients, not infrequently culminating in violent outbursts. This in turn leads to increasing use of sanctions and security measures such as plexiglass between clients and staff, while private security personnel maneuver clients through turnstiles.

An unintended negative side effect of methadone programs --and perhaps of specialized drug treatment in general-- is that they, to a certain extent, endorse the subculture and block societal integration. (73) In contrast with policy formulations, (54) known heroin users are not treated as normal citizens and they may well be the most stigmatized group in society -- denoted as Junks by the public and media, as well as by policy makers and the treatment and care agencies. A Rotterdam drug prevention worker summarized the impact of Dutch drug treatment practice on the heroin using population cynically but concisely as "stabilize, consolidate and segregate". (74) Whereas the Dutch parliament by motion expressed that drug users should be involved in policy making, (75) currently they play no role of significance. Especially in the AIDS-era, these are very worrying developments.

Some New Matters

Currently, HIV prevention for drug users is primarily relegated to the traditional drug treatment and care agencies. Often the social workers of these agencies have problems discussing safer use/sex. Their message rarely transcends the level of do not share needles or use a condom, and is hardly placed in a broader context of general health maintenance. While the Netherlands played a pioneer role in implementing needle exchange, these are mostly integrated in the methadone maintenance programs. Yearly, treatment agencies may contact 60-70% of the population, on a day to day base they only reach less than 40%. Some schemes only serve their own methadone clients. Those most at risk, e.g. out-of-treatment frequent cocaine injectors, are poorly reached by these schemes. The needle exchanges furthermore only offer a limited choice of items --generally only one type of syringe/needle and one or two types of condoms, whereas demand and daily

practice are profusely varied. Furthermore, there is little information on HIV seroprevalence outside of Amsterdam and possibilities of early and profilactic treatment are poorly utilized.

Due to a combination of reasons an increasing number of users are pressured into the streets. As a result, nuisance problems (often of a visual nature) have increased, with a simultaneous growth in drug tourism. In other cities similar trends are observed. The completion of the urban renewal process in Rotterdam (resulting in a decreasing number of empty places for the house address scene) is one important reason. The decentralization of the Rotterdam police force is another. Decisions regarding public order and drug related nuisance --e.g. about whether or not raiding a house address-- are now made at precinct level and not weighed against the interest of the local drug policy. When a certain number of complaints are received, the precinct may form a local unit, which prepares and executes a raid. Some precincts are more active, whereas others seem to maintain the usual, more restrained approach. Already at the end of 1989 it became apparent in this study that the house address scene was the object of increasing police pressure and, in two publications, possible public health consequences were discussed (chapters 14, 15). A related and third reason is the increasing emphasis on social safety in the social renewal policy. In a 1991 Rotterdam survey 86% named public order as the biggest problem. In 1988 this was only 47% and in 1990 64%. Degeneration, decay and pollution of the urban environment ranked second, while foreigners rose on the Rotterdam problem inventory from 9% in 1990 to 17% in 1991. Among Turkish and Moroccan residents public order was experienced less of a problem. In 1991 their main worries were more tangible --unemployment and housing. (76) In operation taking back the street the precincts cooperate with autochthonic, in particular elderly, residents. As one neighborhood activist explained the strategy: "Complain as often to the police so that they bust the premises, if only because they're fed up with our calls". (76) Seemingly, the social renewal policy is primarily an outlet of fears and emphasizes repressive approaches. It is questionable whether a policy based on fear will prove successful in the long term.

The traditional drug assistance organizations have not really responded to the changed space allocations of drug users, nor to the increased prevalence of cocaine use, which further augments the problems in this population. Alternative (volunteer)

organizations, such as the Paulus Church in Rotterdam, try to fill the gaps, but, having only minimal resources, get overwhelmed. Recently, the increased nuisance incited a blaze in the Dutch discussion on drug policy, which displays a considerable backlash in thinking. Politicians throughout the political spectrum trumpet populist solutions (such as compulsory treatment and increased police pressure on congregation sites of drug users). Others want to introduce medical heroin dispensation to decrease the nuisance. Of course, doctors disagree, while most treatment and care services for drug users remain significantly silent. Seemingly, little has been learned in the twenty years since heroin was introduced in the Netherlands. Looking at the recent developments around XTC this seems all the more the case. Large XTC seizures followed by a wave of mostly negative and sensational media reports in the first half of 1992 prompted outcries to ban "illegal house parties where increasing numbers of under- sixteens indulge in excessive use of alcohol and ... XTC." (77) Some parties were busted or banned, others were surveyed by undercover police. While some authors predicted a "pollution of the market" when XTC was scheduled in November 1988, (78) this was not immediately noticeable. The recent seizures have, however, resulted in scarcity on the market. Prices went up and especially XTC tablets offered at parties and other irregular channels (as opposed to friendship networks that pool money) vary highly in quality. This destabilized XTC quality demonstrates again that availability is the feedback model's factor, which is the most vulnerable for repressive drug policy. In addition to the unstable quality, variants of MDMA, such as the more potent MDA and weaker MDEA are being marketed as XTC, as well as other related drugs, such as amphetamine. At the time of its introduction (second trimester of 1992) MDEA was still legal. According to Jamin, Adelaars and Blanken, the introduction of MDEA demonstrates how the drug trade tries to by-pass the opium law. (79) Ketamine has recently also been sold as XTC in the Netherlands. (80) In England the drug seems to have gained some popularity after initial marketing as XTC. (81 82) Ketamine is a pharmaceutical drug used in anesthesiology with powerful hallucinogenic properties. "Compared to MDMA, Vitamin K is Tenth Gear. Where everyone who favoured ecstasy spoke of its mildness, the K people always led off by talking about its power." (83)

The turmoil on the XTC market thus introduced a considerable potential of secondary harm. Furthermore, according to some informants, reduced availability of XTC resulted in anxiety and drug-seeking behavior among users in some parts of the club circuit. De Loo observed that heavy users are becoming isolated from the moderate ones, who blame them for the negative media attention. (80) The feedback model predicts that such a repressive approach would induce the formation of a drug-driven, survival oriented subculture, users' alienation from mainstream cultural information sources, and obstruction of natural processes of self-regulation. These observations may well be the first signs of such a development.

It can thus be concluded, that, once innovative, currently the normalization policy shows several signs of self-contempt and fatigue, especially at the practical level. It is questionable whether in its current form it is suitable to deal with the demands of the 1990s.

Revitalization of Dutch Drug Policy

Transforming the Leading Policy Incentive: Towards a Controlled Availability of Drugs

There is thus a clear need to adjust the policy. When the Netherlands wants to maintain its position on the innovative frontier of the international discussion on drug policy, it must pursue new ways and approaches to counter the above discussed problems. Goldstein and Kalant recently wrote that "the practical aim of drug policy should be to minimize the extent of use, and thus to minimize the harm." (56) Most attempts to reduce the extent of use have relied on prohibition based supply reduction strategies. Not only have these strategies failed to check the use of drugs in countries with a tradition of illicit drug use, but (injecting) drug use is increasingly spreading to new regions. This spread may even be the result of drug prohibition as this has provided the economic incentive for the illicit drug industry, and spreading patterns often follow the routes of illicit drug trafficking. (84) Likewise, prohibition of one drug may induce the emergence of other, more potent drugs and more efficient drug administration rituals. Within months after the establishment of anti opium laws in Hong Kong, Laos and Thailand heroin use appeared suddenly and injecting came up. (85) Equally important is that these conventional strategies have introduced a plethora of secondary harm (see chapter ten). While Goldstein and Kalant seemingly refer to primary harm --harm directly related to the use of a certain substance, e.g.

deteriorated tissue integrity of the nasal septum, due to frequent intranasal cocaine use or fetal alcohol syndrome in babies born from alcoholic mothers-- , this may well be exceeded by the magnitude of secondary harm (harm related to drug policy), in particular since the advent of the AIDS epidemic. Minimization of harm associated with drug use, therefore, should be the practical aim of drug policy. Reduction of the extent of use may well be part of the strategy, but prohibition has proven to be unsuitable for this purpose, as it has resulted in the almost total absence of government control over the chain between producer and consumer. By criminalizing the drug trade, control has been handed over to illegal enterprise, resulting in an uncontrolled availability of drugs.

Recently one of the architects of the normalization policy, Eddy Engelsman, contemplated on a drug policy outside of criminal law. (86) Abandoning criminal law as the (dominant) policy instrument does, of course, not imply abandoning all control. Drugs are and have always been key commodities. Just as any other key commodity (food, housing, legal drugs), these need to be regulated. But by abandoning criminal law the chain between producer and consumer can be regulated more efficiently by simpler enforceable regulation systems. While this would be a preferable situation, it would be contra-indicated to change the law abruptly and legalize all drugs from one day to the other. This would disturb the natural progression of the described cultural transition process. Both users and mainstream culture need the time to adapt to increased availability of drugs.

Instead, the Dutch normalization policy should be revitalized --from containment of problematic drug use and management of drug related problems, the leading policy incentive should be shifted towards actively influencing the nature of drug use and directing drug using cultures towards less harmful patterns of use. The above explained cultural transition process of the heroin culture should be more actively influenced --its orientation at survival lessened while encouraging a transition towards progress. Likewise, the social controls that communicate safe use patterns in the XTC culture must be stimulated. The results of the present study suggest that such interventions are certainly feasible, especially in the Netherlands. But this will require sophisticated strategies and innovative interventions focussed on the drug culture(s) and its determinants. A step-by-step decriminalization of the various drugs --leading to, what one might term, a controlled availability-- should be part of the policy

instruments, but is not the only one available. In the broader perspective of current Dutch social policy thinking, such a development would, in fact, offer a meaningful example of social renewal. Evidently, these activities should be monitored closely by research.

Increased Drug Availability and Prevalence of Use

It is often argued that increased drug availability will result in increased use. (56) Drugs themselves are considered to have such powerful reinforcing properties that mere availability will lead to (uncontrolled) use. Animal experiments are often presented to support this thesis. (87) However, Rhesus monkeys given four hours of daily access to cocaine during which drug delivery resulted from each lever press regulated their intake to a remarkable degree and showed stability in their daily cocaine use over periods of months. (88) In contrast, increasingly restrictive experimental regimes result in higher responding rates (and thus use levels). For example, monkeys in a progressive ratio schedule (89) would vigorously press the lever up to 12.800 times in order to get a shot of cocaine, depending on the dose. (90) In as much the drug taking behavior of these caged animals can be compared with that of humans in their natural setting, these experimental regimes more likely measure factors which resemble different aspects of prohibition in a highly stressful social setting, than a single pharmacological drug effect. Furthermore, in laboratory experiments with two rat colonies --one in a conventional experimental environment, the other in a simulated natural environment, a rat park-- affinity for opiate drugs could be established only under restricted conditions. (91)

Another argument often put forward is that of the per capita higher prevalence of use and addiction among physicians and other medical professionals, who have easy access to drugs. (56) These professions, however, are often very stressful with long working hours. More importantly, drug taking medical professionals risk heavy sanctioning, such as loss of professional license and criminal prosecution. Because of this threat and the social stigma involved with the use of illegal drugs, these drug using professionals are almost without exception solitary covert users. They are highly secretive about their use and do not associate (knowingly) with other drug using professionals. (92) This seriously hampers the formation of controlling rituals and rules as there is no exchange of information between, nor support or pressure from, (drug using) peers.

The rising prevalence of illicit drug use in production regions or the prevalence of opiate use in nineteenth century Europe and North America is likewise presented to support the thesis that increased availability will result in increased prevalence of drug use. However, table 18.1 indicated that in the Netherlands the use of drugs has stabilized, despite their relatively high availability. In addition to what was said above about the role of prohibition in the current spread of drug use, it can be argued that today's socio-economic conditions do not compare to those of the previous century, in which many drugs furthermore were rather indiscriminately promoted. Nowadays knowledge of and experience with drug use has increased greatly --not only of the pharmacology of the substances, but, more importantly, also of the social (learning) processes involved in drug taking. Likewise, prevention and education has become a science. Anti-tobacco and alcohol moderation campaigns indicate that lower use levels and self-regulation can well be established within a lawful context.

A Demand for Positive Rules

Negative rules deny the pertinence of behavior (thou shall not!) without offering acceptable alternative models of conduct. Almost all current drug laws are negative rules which do not make sense to those who use drugs and thus brake them by definition. Therefore negative rules are difficult to enforce. In every situation where people are subjected to rules, which they do not agree with or see the rationale of, they will look for and create channels to evade these rules and protect their interests. Thus, in every closed institution (prison, boot camp, psychiatric clinic) one will find an informal/underground communication and exchange system that distributes restricted information and commodities (e.g. food, electronics, (bootlegged) alcohol and other drugs). (93) Likewise, many people disagree with speed restrictions on multiple lane highways --not only do they break them, but they also try to circumvent enforcement with radar warning devices. Positive rules, at the other hand, make sense even to those who break them and thus are easier to enforce. Traffic lights and way of passage rules, for example, are ubiquitously accepted. (94) But, illustrations of positive rules can be found in all social groups. Figure 18.5 depicts an example of a positive rule regulating tobacco smoking on a birthday. The text translates into: "We would prefer that you did not smoke in this living room until our daughter Tessa Fairy is in dreamland and we give you the sign."

Figure 18.5

The implementation process of a controlled availability of drugs must be accompanied by education and prevention activities aimed at strengthening the social determinants of self-regulation. While a certain extent of ritualization around drug use is a positive requirement of self-regulation processes --in particular some re-ritualization around alcohol use may be beneficial to users and society as a whole-- the use of illicit drugs should be de-ritualized. The symbolic power of sharing a dose of heroin should be weakened as well as the current status of heroin use as a key indicator of subcultural identity. The strong reliance on, often (group) idiosyncratic, rituals should be superseded by more general applicable rules. These should take the form of positive rules that sanction socially acceptable patterns of use.

Social Policy and Life Structure

In general, the life structure of drug users is not a specific target of drug policy, but rather the subject of general socio-economic policy. Unfinished education, unemployment, lack of perspective and other (psycho-social) life stressors have all been associated with problematic drug use. (95 96 97 98) In that respect, socio-economic destitute is perhaps the main determinant of increasing prevalence of (uncontrolled) drug use in and around the poverty stricken production regions. This emphasizes the multi-dimensionality of the proposed model. It may be a rather moth-eaten phrase, but drug policy must be embedded in a broader framework of socio-economic policy that aims to provide citizens with the skills and chances to pursue a satisfactory life. The potential role of drug treatment in this area will be addressed further below.

Availability of Cannabis and XTC

Actually, the time for adjustment of the cannabis policy is riper than ever. While there are no availability problems at the consumer level, in the current twilight zone situation the cannabis trade seems to be increasingly controlled by non-legal enterprise. The number of coffee shops is growing and some are apparently less willing to comply with the --typical Dutch-- implicit rules, for example regarding nuisance, advertisement and availability of other (il)licit drugs. Completely unrestricted opening hours, furthermore, result in a --quite undesirable-- unregulated availability. Further decriminalization, --which may imply legalization-- would allow for a controlled availability through effective regulation of (domestic) cultivation, geographical spread of sales outlets, opening hours, product range, advertisement,

quality testing, etc. (99) New drugs, such as XTC could be subjected to an experimental period, in which their controlled availability through regulated channels should be guaranteed. Such a strategy would probably not only eliminate the fast developing black market, but prevent considerable potential harm when supported by well considered and targeted information campaigns. Political ignorance and fear of foreign critique, however, result in indecisiveness and procrastination. Even worse, proposals for a more repressive approach of cannabis have recently surfaced. Likewise, while the Rotterdam drug squad is unhappy with the illicit status of XTC and complains about the recent pollution of the XTC market, (100) this development is very likely the result of the targeted actions of inter-regional organized crime squads (IRTs), picking an easy mark. (101) The prolonged criminalization of these drugs can be considered a serious crime against public health.

Strengthening Rituals and Rules of Users of Cannabis and XTC

In the domain of life structure users of cannabis and/or XTC probably need not be targeted as a distinct population, as their lives are fairly integrated in non drug dominated networks. In contrast, the formation of rituals and rules directed at moderation and safe controlled use of these drugs will require extra attention, especially in the case of XTC. In addition to mainstream media --school, public service announcements similar to the national alcohol moderation campaign-- subcultural channels may also be utilized, for example to distribute information on how to handle in case of adverse effects of drug use. A good example of this approach is a recent flyer from MDTIC in Liverpool on how to prevent, and handle in case of, heatstroke. This glossy party flyer-like folder uses lay-out, style symbols and argot of the English rave culture to present a life-saving message and is distributed via subcultural networks, such as certain records and clothing stores. (44) Not only can these media be used to strengthen and transfer existing, but also to feed new cultural norms. Gay Men's Health Crisis' billboard advertisement campaign in the U.S. stating that "9 out of every 10 gay men use condoms" in a time that perhaps one out of 10 actually did so, provides a good example. The key issue is to go beyond simplistic don't do this, don't do that messages and provide positive identification models, non-judgmental advice, and practical examples of safe conduct. When such valuable information is introduced into the community it will be disseminated by users themselves utilizing natural network links and peer pressure. (102)

Availability of Heroin

The real challenge, however, is to be found in the heroin culture. Self-regulation processes in this community are seriously hampered by two decades of repression. Policy must be directed in ways which empower users, stimulate self-regulation, and make it possible for them to take responsibility for their lives in general and drug use in particular. Medical dispensation of heroin or injectable drugs is perhaps beneficial for a subgroup of users, for example those with serious stages of HIV disease, but will not have a significant impact on the heroin culture as a whole. It does not take away craving for cocaine, nor does it stimulate self-control, as control over the use level remains in the hands of an outside force --the doctor who writes the script. Therefore, enlarging drug availability must be organized outside the realm of drug treatment or care. As explained before, instant legalization is likewise not advised. Instead, heroin and cocaine should gradually become easier available, and, applying the expediency principle, consumer transactions should no longer be prosecuted.

A lot can be learned from the decriminalization of cannabis and the current policy towards house addresses in Rotterdam. Future policy must be a logical elaboration of, and thus be grounded in, the current street practice of tolerated house addresses where drugs are sold and used. This implicates an important role for the police. The police must extend its tolerant approach to a more active, regulating one. Use and vending of drugs at house addresses or in certain cafes should no longer be a reason for intervention, unless it involves inadmissible nuisance or other unlawful activities (e.g. fencing). An alternative or complementary possibility is the creation or endorsement of low key members only club houses, which can best be envisaged as a hybrid of the coffee shop and the opium den, (103) where drugs can be purchased for reasonable prices and used in a relaxed atmosphere. In addition to tolerating these venues, the police should actively explain this policy to the people that run them. When use and consumer sales are no longer reasons for intervention, and when given the proper support, users will be more than willing to cooperate with the authorities to control nuisance.

An interesting example of this proposed policy --apparently practice precedes policy again-- is provided by the recent off-the-record cooperation of a police precinct, a neighborhood social safety project (a positive exception) and a house address in the west of Rotterdam. In contrast with the rather repressive social control approach

sketched above, drug use itself is accepted to a certain degree in this neighborhood and provisions are taken to reduce the harm for both the neighborhood and the users. For example, a steel sharpsafe has been installed in a park where injecting happens regularly and a space has been provided to a group of users. This tolerated house address offers both smokers and injectors a place to use. While clean needles are supplied, the provisions for smokers are, however, more favorable. The place has distributed a newsletter among its visitors issuing the house rules, information about health issues and other significant topics. HIV prevention materials are supplied by a local outreach team while health workers have access to the place. Its visitors have been active in removing abandoned needles off the streets and parks in the neighborhood and the side walk in front of the place is frequently swept. Police officers visit the place several times a week to discuss the state of affairs and to provide practical advice to visitors. This regulatory approach is being extended to several dealing addresses while simultaneously, a number of really vexatious addresses have been closed down, leading to a decrease of nuisance in the neighborhood.

In general, these places should discourage injecting by offering limited provisions for injecting (however, without stimulating unintended unsafe situations) and make more moderate modes of administration, such as smoking more attractive. Perhaps a few separate venues for injecting should be created. Quality control would become feasible and new, milder, smokable products (e.g. heroin reefers) can be introduced at lower prices than injectables. Coca tea or "Cokee" may be served free as there are some indications that this may reduce cocaine craving. (7 104)

Changing the Rituals and Rules of the Heroin Culture

The proposed controlled availability policy will induce a gradual adaptation of rituals and rules. However, when left to its own virtue it will take some time before these cultural changes become apparent. One should not forget that most of the current rituals and rules have been developed over a period of two decades and during that period they have proved highly functional. Merely feeding the culture with information is insufficient for establishing rapid change. But, in light of the HIV epidemic among IDUs rapid speed is of the essence. Such fast interventions cannot be expected from the established treatment agencies. A view which is apparently shared by the authorities as a recent government report doubts the effectivity of the current efforts.

(105) The report considers merely providing leaflets and syringes insufficient. It states that prevention policy needs to be stronger and more innovative in relation to methods of approach. The report recommends to involve (ex) users in approaching out-of-treatment populations and employing drug users as para-professionals. Institutions are suggested to encourage self-organization of drug users and offer them facilities to do so. (105) There is thus a recognized need for immediate action directed at changing the rituals and rules of the heroin culture regarding HIV related behaviors.

Only few peer support initiatives have been undertaken in the Netherlands. One Rotterdam outreach program cooperated with active IDUs to distribute clean works via established network relations (described in chapter fourteen). In the Deventer No-Risk project active and former drug users were recruited to educate out-of-treatment users. They supplied prevention materials (needles, condoms, etc.) and provided HIV prevention trainings to other users urging them to subsequently pass on the information in their networks. (106) Another pilot project in Nijmegen worked with two former sex workers to provide peer education. (107) While all of these projects suggest that involving drug users in prevention activities is feasible and promising, they also revealed some obstacles in the realm of continuity, status problems, cooperation with other professional organizations, credibility, training and support, etc. (107 108) Very similar problems are described by Broadhead and colleagues, who studied the San Francisco NIDA outreach demonstration project. (102 109) They referred to these problems as agency problems, which can occur in any bureaucratic organization. A major problem of the Dutch peer support projects has been the lack of sufficient funding, in particularly for proper scientific evaluation. As a result, it is not possible to adequately assess their contribution. Likewise, these projects have a rather weak theoretical basis. Nevertheless, peer support/pressure seems an important method for HIV prevention. The current challenge is to operationalize the concept in ways that preclude or overcome the indicated problems.

Recent sociological research offers interesting perspectives on the formation and enforcement of norms, valuable for the concept of peer based HIV prevention. (110 111) In general, emergence of norms is dependent on three factors: 1) inclinations or actors' preferences regarding their own behavior; 2) regulatory interests or actors' preferences regarding the behavior of others; and 3) enforcement resources or

measures for enforcing norms, for example access to sanctions and information. Most studies of norm emergence have focussed on inclinations or enforcement resources, but these recent studies emphasize the role of regulatory interests. (111) Regulatory interests create the demand for norms, while contradictory inclinations determine the supply cost of normative compliance, giving the emergence of norms a market-like quality. Social norms can only emerge when the regulatory interests that order cooperation outweigh the contradictory inclinations that lean toward defection. (102)

As knowledge of the AIDS epidemic diffused into the IDU community, new regulatory interests to reduce high risk behaviors emerged. But, while IDUs share these regulatory interests in preventing HIV infections, there are numerous contradictory inclinations resulting from the recurrent risks inherent to survival in the heroin culture (police harassment or arrest, overdose, rip offs and violence). The reduction of these conventional risks often relied on strategies that entail risks for HIV infection (not carrying works, use of shooting galleries, using with a partner and needle sharing). (112) Nonetheless, as chapter twelve explained, new safe use norms have emerged. The aim of future interventions must thus be to strengthen already existing risk-reduction norms and where necessary stimulate their adoption.

Based on Heckathorn's theory of group-mediated social control, (110 111) Broadhead and Heckathorn have designed a model to harness the potential contributions of IDUs' peer support, which, they claim, will preclude the discussed agency problems. (113) This model, "termed client-driven intervention (CDI) is based on two design principles. First, to preclude agency problems, IDUs are provided with modest, but direct incentives to take over the functions traditionally performed by outreach workers. Second, to foster the creation of risk-reduction norms or bolster already existing norms, [the program relies] on secondary rather than primary incentives. [T]he aim is not merely to affect the behavior of individual IDUs, but to alter the manner in which IDUs exercise influence over one another." (102) (emphasis in original) In this design IDUs will receive a modest payment or primary incentive for their participation in an interview-test-education session. Ensuing they will be receiving additional payments for recruiting peers, educating them and distributing prevention materials. These latter payments will be provided afterwards and are secondary incentives as they reward measured changes in their peers'

behavior. In their proposed study Broadhead and Heckathorn will compare a CDI with a traditional outreach design.

The CDI model seems also promising for utilization in the Netherlands. The socio-political conditions may even be superior compared to the USA. The possibilities of more formal forms of drug users' self-organization, at the other hand, have not yet been sufficiently examined in the Netherlands. Both the success of the Dutch Junkiebonden (junkie unions) during the 1980s (114) and the current Australian practice of engaging drug user self-organizations in HIV prevention (115 116) suggest an important reservoir. It will be highly interesting to assess the validity of the two models for the Dutch situation. A comparative study is currently being planned. (117)

Improving the Life Structure of Marginalized Users

When drugs become normally available the need to spend much time on drug related activities and with other drug users diminishes. Many users will be able to pick up conventional activities and responsibilities (such as work) again, and their social network will gradually consist of less drug related connections. On the other hand, persistent involvement in illicit drug use limited the feasibility of developing legal professional skills and made the development and maintenance of criminal skills useful and opportune. Criminal activities not infrequently developed prior to or simultaneously to the drug use career (66) and a considerable number of people have never been legally employed. The informal job market (drug dealing, acquisition crime, prostitution) provides meaning and structure to the lives of many people with little chances of legal employment. (73) These factors may seriously hamper the normalization of the life structures of many users. This will be exacerbated by the high level of stigmatization and the resulting impaired self-concept. Furthermore, as was discussed in 18.3, for many marginalized users drugs are only one of the many problems. Homelessness, a complete lack of perspective, psycho-social problems and an impaired health status (HIV) are among the problems that will further frustrate making changes.

These are among the problems to be addressed by future treatment and care policy. Mindful of the discussion in 18.3, however, it is doubtful if the established treatment and care system -- with its large emphasis on maintaining or curing opiate addiction-- is equipped to take on these new challenges. It appears too much to be a one size

fits all approach with little tailoring towards needs and potentials of individual clients. (86) Therefore, revitalization and reorganization of the treatment and care system is an important element of future policy. Old dogmas and structures should be reconsidered and examined on their significance in the context of the new policies. New objectives need to be formulated and perhaps new organizational frameworks established, that cut through existing barriers. Without making any pretensions to comprehensiveness, the following paragraphs will discuss some of the areas to be considered.

Drug users have the same right to health care as any other citizen in the Netherlands. Their treatment and care needs should be met by appropriate approaches, whether these are provided by general or specialized (psycho-social) health care organizations, including drug treatment programs. Drug use in itself may not be a ground for refusal. Independent intensive case management, which matches clients' needs with the services offered can make an important contribution to this aim. These cost-effective case managers can be envisaged as a type of consumer brokers, who can work to help clients negotiate the multiple and complex systems of existing institutions and further serve as advocates on behalf of marginalized clients who are not accustomed to doing so for themselves. Case management can help marginalized users to regain some control over their lives again and prevent others' slipping into (further) marginalization. It will also lead to a more efficient utilization of the existing service capacity. Perhaps the provision of services to drug users should obtain more of a free market quality. In New Zealand, for example, the introduction of free market health care has seemingly had a positive effect on the empowerment of users, as they gained the same status as consumers of any other health care provision. (118)

Financial management (e.g. benefits, bills, debts) can prevent many of the currently typical problems, such as evictions from housing. In Rotterdam, a low threshold SRO (single room occupancy) would meet the needs of many currently homeless users. In that way, they would also be much easier to approach by other service providers and become more responsive to public health interventions, such as HIV prevention or TB campaigns, as it has been established that homelessness and the resulting inability to plan and organize is associated with enduring risk behavior and positive serostatus. (119)

One of the main determinants of life structure is a steady pattern of daily activities. It is almost undisputed that work fulfills an important role, both in respect to daily patterning and in terms of social status and self-respect. So called re-socialization programs which offer skills and job training have been in function for quite a while, but their results are not always clear, as little evaluation has been conducted. Often these projects are part of the same organization that runs the methadone program and only clients qualify. One can wonder whether a certificate from a drug re-socialization program is an advantage in a job interview. Often programs are rather inflexible without exploring and developing personal skills and talents. A skillful con man may well be trained to be a successful insurance salesman. It can furthermore be questioned whether the activities many of these programs offer match the demands of the labor market. It is therefore advisable that these specialized projects are incorporated by, or form solid referral agreements with general job training programs. The goal must be to help people get real jobs. Experiments in this direction are currently underway and seem promising. (120 121) Currently, most projects are open only to ex-users, or persons who only use methadone. It is advisable to relax this criterium to stabilized users. Likewise, methadone programs should be more flexible to working schedules of employed clients.

Additional (illegal) drug use is often a ground for expulsion from treatment. It is a truly bizarre phenomenon that upon discovery of use --whether this entails an occasion of recreational use or a relapse into symptomatic behavior-- people are debarred from treatment. Wouldn't it be equally or more justifiable to intensify the treatment? After all, in many cases problematic drug use has been the reason for seeking treatment in the first place.

Methadone dispensation should be separated more from other services. Treatment is now often polluted by all sorts of power games around this synthetic substitution drug. By separating the two, treatment goals become clearer and trusting relationships between client and therapist are better possible. Methadone dispensation schedules could be personalized. For some clients it is best to pick up their methadone seven days a week, for others once a week suffices. In Rotterdam the methadone dispensation has recently been computerized. Perhaps providing clients with a PIN-code card should be considered, so that they themselves can choose the time of pick up, resulting in a more even spread over the day. This would decrease

their dependence on the system and limit the scene function of the methadone programs. Many clients would be better served if they could get their methadone from their general practitioner, guaranteed that the GP receives the proper support. (122 123) One can imagine that when drugs become easier available, the demand for methadone would be reduced anyway. Its function would probably also change as it would less frequent be used as a maintenance and more as a crisis or reduction drug.

A seriously under-developed area in the Dutch drug services field is health maintenance. The need for a health maintenance approach will grow with concerns about HIV infection, but it would be erroneous to limit such an approach to HIV care or AIDS prevention. Currently, licenced nurses invest the majority of their time in methadone dispensation --an incredible waist of human resource and training, which decreases job satisfaction and contributes to the negative image many have of their clients. With the right additional training, their skills can be utilized in helping their clients learn to maintain their own health, given the resources available to them.

The policy changes and interventions discussed in this section, while not a panacea and certainly necessitating the same scrutiny as any other well intentioned advice, are logical extensions of the current normalization policy. It is expected that they will gradually reduce the problematic nature of illicit drug use to its genuine proportions and allow users as well as society at large to deal with the effects of drugs in a more rational manner. As has been put forward before, the proposed changes must be carefully monitored by research. Therefore, the final section of this chapter will consider some research issues.

Considerations for Future Research

The studies reported in this thesis all considered certain aspects of drug use behavior in its natural environment. Little detail is yet known about the behaviors of drug users outside treatment institutions, in particular in Europe. Some epidemiological studies are available, but these explain little of the drug taking behavior itself, nor of its functions and meanings. As explained before, this lack of knowledge has been the reason for choosing ethnography as the principle methodology of the project. (124) This approach has been highly fruitful, as many different aspects of drug use could be described and interrelated in a wider context. The lack of existing knowledge was

likewise the reason for the rather general initial research questions. The resulting wide scope allowed for the formulation of several hypotheses along the research process --of which some have subsequently been assessed in a quantitative manner- - and the serendipitous discovery of frontloading.

In particular in the rather virgin field of AIDS and drug use there is still much to discover for which we may be blind when merely relying on standardized measurements. As Turnbull wrote: "It is too easy to go into a field situation expecting or hoping to find this or that, for invariably you come out having found what you wanted. Selectivity can do great things in blinding one to a wider reality." (125) The need for studies which add to our basic knowledge of drug use, its relations with HIV and the factors that obstruct or promote safer and controlled drug use is obvious and urgent. Exactly here, ethnography has much to offer as it has a rich and fruitful history in exploring and explaining drug use behaviors. It is a large and precious reservoir of theoretical and practical knowledge, which can be drawn from in designing AIDS and drugs studies.

In addition to this open focus ethnography, there is a clear need for controlled field intervention studies which develop simple, practical methods and strategies for checking the spread of HIV in the drug user community, grounded in its cultural traditions. In that respect, it is of crucial importance to contact those populations that are currently unreached. In order to generate reliable and valid data, such studies -- consider the name Experimental Comparative Ethnography-- must include multiple research sites and experiment with new methodologies that refine ethnographic techniques for intensive case-finding and description, for example randomized snowball sampling, (126) network analysis (127) and Experience Sampling. (64 128) The urgency of the AIDS pandemic underlines the necessity of cooperation between, and integration of, qualitative and quantitative approaches, in particular in search of innovative methodologies. Attempts in this direction are e.g. undertaken in some of the American NIDA demonstration projects. (129) Unfortunately, in many of these projects the ethnographic component has been made subservient to the collection of large statistically analyzable data bases. Instead, ethnographers should take an active role in designing multimethod studies, that are driven by ethnographic analysis. Ethnography is especially suited to give direction to such multidisciplinary projects as it can build bridges between policy and hidden populations (130) which

are essential for successful drugs and AIDS policies. Ethnography provides the information, skills and experience required for working with indigenous research collaborators and, above all, it can generate the theoretical framework and testable hypotheses for subsequent quantification. Thus, ethnography provides not only the eyes and ears of the research but also its thriving analytical power. An interesting example of such an inventive cooperation is provided by the above discussed CDI design. (113)

In this thesis a theoretical model has been presented for explaining self-regulation processes in human drug taking. In the previous chapter the model was used to explain the paradoxical cocaine/heroin patterns of the study subjects. But application is not limited to this population. It may equally be applied to other populations and other drugs. The model seems suitable for application in qualitative, quantitative and mixed designs. It can be utilized in cross-cultural comparisons of drug policies and different populations or subcultures using the same drug. The model may likewise be used in longitudinal and evaluation studies. An important future task will be to operationalize and refine the model and its determinants. The following variables can then be considered for inclusion:

- Demographic and background statistics
- General and personal socio-economic circumstances
- Drug use variables (type, dose, frequency)
- Social network variables
- Individual and social ritualization processes (e.g. the nature of rituals; the intensity of ritualization)
- Nature and power of rules
- Drug users' subjective experiences and time patterning regarding their drug use
- Psycho-social health
- Physical health
- Treatment history
- Drug availability, both at the general and the personal level.
- Legal and social status of drugs
- Parameters of subculture (e.g. argot, sign language, style symbols)

Another matter in need of further study is the apparent graduality and multidimensionality of self-regulation processes and their relevance in the development of comprehensive definitions. As was explained in chapter three, the development of valid definitions of drug use related states has been a long and unrewarding task. Feeling a need for a concise definition of, for example, controlled

drug use, one may be tempted to define such a notion in terms of quantifiable measures. But beyond the extreme examples, sheer quantity is an insufficient measurement. Quality of use --operationalized in the factors that constitute the feedback model-- should therefore play an important role in attempts to define these issues. (131)

Future drug use research in the Netherlands should concentrate on the factors that determine self-regulation processes. As this has recently also been suggested in a position paper on research of the Dutch ministry of health, (132) this should have consequences for funding. Utilizing the feedback model several studies can be suggested, for example:

- An Experimental Comparative Ethnography of XTC use in selected cities in the Netherlands (e.g. Rotterdam or Amsterdam), the United Kingdom (London, Manchester or Liverpool) and the USA (New York or Chicago) for example, will provide significant information on this comparably new and unpolluted drug phenomenon.
- Another study might focus on the suggestion that new groups of heroin users (e.g. young Moroccans in Amsterdam) are seemingly able to regulate their use of this substance in ways that avoid loss of control.

Finally, two research issues, significant to the prevention of HIV need to be addressed. First, as the HIV infection potential of Syringe Mediated Drug Sharing techniques has been recently established, (133) the prevalence, circumstances, and possibilities for prevention of HIV transmission through these techniques need to be studied. Secondly, as ammonia is almost ubiquitously available on dealing addresses, it is worthwhile to assess its potential as a viricide in needle cleaning simulations. (134) If this agent would prove effective it could be promoted among IDUs in the Netherlands. As it is a familiar product in the heroin/cocaine scene, acceptance as a simple disinfectant may be much easier than when bleach would be promoted as such.

References

1. Strauss AL: Qualitative analysis for the social sciences. Cambridge: Cambridge University Press, 1987.
2. Nadelmann EA: US drug policy: A bad export. *Foreign Policy* 1988; 70: 83-108.
3. Editorial: Getting gangsters out of drugs. *The Economist* 02-04-1988: 9-10.
4. Szasz TS: Our right to drugs: The case for a free market. New York: Praeger, 1992.

5. Wijngaart GF: Competing perspectives on drug use: The Dutch experience. Amsterdam/Lisse: Swets and Seitlinger, 1991.
6. Grund J-PC, Blanken P: From 'Chasing the Dragon' to 'Chinezen': the Diffusion of Heroin Smoking in the Netherlands. IVO Series 3. Rotterdam: Instituut voor Verslavingsonderzoek (IVO), 1993.
7. Siegel RK: Intoxication: life in pursuit of artificial paradise. New York: Pocket books, 1990.
8. Goody E: Greeting, begging and the presentation of respect. In: La Fontaine JS (Ed.): The interpretation of ritual. London: Tavistock, 1972.
9. Goffman E: Interaction ritual: Essays on face to face behavior. New York, Pantheon Books, 1967.
10. Wallace AFC: Religion: An anthropological view. New York: Random House, 1966.
11. Berger J: Pig Earth, Historical Afterword. New York: Pantheon, 1979, pp. 195-213.
12. Epen JH van: Wat doen mensen met mensen? In: Heroïneverstrekking als alternatief voor behandeling: Verslag van een tweedaagse conferentie. Amsterdam: SKS, 1977; pp 4-8.
13. Noorlander EA: De doelgroep van P3. In: Mol A, Majoor B, Malinowski H (eds.): Junkies little helpers. Rotterdam: STOP, 1982.
14. Malinowski B: A scientific theory of culture and other essays. New York: Oxford University Press, 1960.
15. Cohen H: Drugs, druggebruikers en drug-scene. Alphen a/d Rijn: Samson, 1975.
16. Sandwijk JP, Cohen PDA, Musterd S: Licit and illicit drug use in Amsterdam. Report of a household survey in 1990 on the prevalence of drug use among the population of 12 years and over. Drugbeleid Gemeente Amsterdam, no. 12. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1991.
17. Korf DJ: Cannabis retail markets in Amsterdam. International Journal on Drug Policy 1990; 2(1): 23-27.
18. Jansen ACM: Cannabis in Amsterdam: een geografie van hashish en marihuana. Muiderberg The Netherlands: Coutinho, 1989.
19. Du Toit BM: Ethnicity and patterning in South African drug use. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 75-100.
20. Nagendra SP: The concept of ritual in modern sociological theory. New Delhi: The academic journals of India, 1971.
21. Strang J, Griffiths P, Gossop M: Crack and cocaine use in South London drug addicts: 1987-1989. British Journal of Addiction 1990; 85: 193-196.
22. Grund J-PC: Personal observations, 1985-1990.
23. Royen M van: Verslaafden nooit voorgoed vastprikken (interview with Chiel van Brussel, head of the drugs department, GG&GD, Amsterdam). NRC Handelsblad 16-09-1992.
24. Cowboy, Thimbles & Mr. Ladies: Something for your mind. Turn up the bass, House party II, the ultimate megamix (CD cover). Nieuwegein, NL: Arcade Benelux BV, 1991.
25. Kaplan CD, Grund J-PC, Dzolic MR, Barendregt C: Ecstasy in Europe: Reflections on the Epidemiology of MDMA. Community Epidemiological working group proceedings. Division of epidemiology and statistical analysis. Rockville Maryland: NIDA, 1989: III 22-30.
26. Veen G van: Een kosmisch orgasme. Volkskrant, 22-12-1990.
27. Grund J-PC: Personal observation, 1989.
28. Adelaars A: Personal Communication, 1991.

29. Kuitenbrouwer J: De taal van de House! NRC Handelsblad, 21-09-1992.
30. Kuitenbrouwer J: De taal van de pil. NRC Handelsblad, 05-10-1992.
31. Adelaars A: Ecstasy. De opkomst van een bewustzijnsveranderend middel. Amsterdam: In de knipscheer, 1991.
32. Korf DJ, Blanken P, Nabben T: Een nieuwe wonderpil?: verspreiding, effecten en risico's van ecstasygebruik in Amsterdam. (Jellinek reeks; nr.1.) Amsterdam: Jellinek Centrum, 1991.
33. Korf DJ, Blanken P, Nabben ALWM, Sandwijk JP: Ecstasy-gebruik in Nederland. Tijdschrift voor Alcohol, Drugs en andere Psychotrope stoffen 1990; 16(5): 169-175.
34. Anonymous: Grote drugsbende bij actie opgerold. NRC Handelsblad, 15-02-1992.
35. Lafferty F: Ecstasy? The Sunday Times section 4 Style & Travel 16-02-1992, pp. 1-2.
36. Nabben T: Paddestoelenwereld. Amsterdams Drug Tijdschrift 1991; 8(3): 7-9.
37. Korf DJ: Trends in hallucinogenen. Amsterdams Drug Tijdschrift 1991; 8(3): 9.
38. Nabben T: Trip met Gorbatsjov. Amsterdams Drug Tijdschrift 1992; 9(1): 5-7.
39. Grund J-PC: Personal observations at House Parties, 1988-1992.
40. Harding WM, Zinberg NE: The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit BM (ed.): Drugs, rituals and altered states of consciousness. Rotterdam: Balkema, 1977: 111-133.
41. Grund, J-PC: Where do we go from here? The future of Dutch Drug Policy, British Journal of Addiction 1989; 84: 992-995.
42. Cohen H: De hasjcultuur anno 1980: een overlijdensbericht. in: Goos CJM, Wal HJ van der (Eds.): Druggebruiken verslaving en hulpverlening. Alphen a/d Rijn: Samson Uitgeverij, 1981.
43. Henry JA, Jeffreys KJ, Dawling S: Toxicity and deaths from 3,4-methylenedioxymethamphetamine ("ecstasy"). The Lancet 1992; 340: 384-387.
44. McDermott P, Matthews A, Bennett A: Responding to recreational drug use: Why clubgoers need information, not outreach. Druglink 1992; January/February: 12-13.
45. Musto DF: The American disease: origins of narcotic control. New Haven, Connecticut: Yale University Press, 1973.
46. Davidson S: Drugs Kruiden van hemel en hel. Helmond, the Netherlands: Uitgeverij Helmond, 1982.
47. Hughes R: The Fatal Shore. New York: Vintage Book, 1986.
48. Leijendekker M: Italianen vechtend over straat om sigaretten. NRC Handelsblad 02-12-1992.
49. Cramer A, Ministry of Health: personal communication, 1990.
50. Entzinger HB: Migratie en de internationalisering van Nederland. In Couwenberg SW (ed.): Op de grens van twee eeuwen: Positie en perspectief van Nederland in het zicht van het jaar 2000. Kampen, the Netherlands: Kok Agora, 1989, pp. 262-272.
51. Kort M de, Korf D: The development of drug trade and drug control in The Netherlands: A historical perspective. Crime, Law and Social Change 1992; 17: 123-144.
52. Narcotics working party: Backgrounds and risks of drug use. The Hague: Government Publishing Office, 1972.
53. Wilson C. (chief-correspondent of Reuter-Nederland) in an interview in NRC-Handelsblad, 02-09-1992.
54. Engelsman EL: Dutch policy on the management of drug related problems. Br J Addict 1989; 84: 211-18.
55. Henderson J: Prevention as an element of the Rotterdam policy on drugs. Rotterdam: City hall. (undated)

56. Goldstein A, Kalant H: Drug policy: striking the right balance. *Science* 1990; 249: 1513- 1521.
57. Korf DJ, Aalderen H van, Hogenhout HPH, Sandwijk JP: Gooise Geneugten: Legaal en illegaal drugsgebruik (in de regio). Amsterdam: SPCP Amsterdam, 1990.
58. Korf DJ, Mann R, Aalderen H van: Drugs op het platteland. Assen/Maastricht: Van Gorcum, 1989.
59. Verveen J: Personal Communication, 1992.
60. Intraval: Between the lines: A study of the nature and extent of cocaine use in Rotterdam. Groningen-Rotterdam: Intraval, 1992.
61. Ieperen B van: Personal Communication, 1992.
62. Cohen P: Cocaine use in Amsterdam in non-deviant subcultures. Amsterdam: University of Amsterdam, 1989.
63. Korf DJ: Twintig jaar softdrug-gebruik in Nederland: een terugblik vanuit prevalentiestudies. *Tijdschrift voor Alcohol, Drugs en andere Psychotrope stoffen*, 1989; 14(3): 81-89.
64. Kaplan CD, Vries M de, Grund J-PC, Adriaans NFP: Protective Factors: Dutch intervention, health determinants and the reorganization of addict life. In: Ghodse H, Kaplan CD, Mann RD (eds.): *Drug misuse and dependence*. Park Ridge NJ: Parthenon, 1990: 165- 176.
65. Swierstra K: *Drugscarrières, van crimineel tot conventioneel*. Groningen: Rijksuniversiteit Groningen, 1990.
66. Grapendaal M, Leuw E, Nelen JM: *De economie van het drugsbestaan: Criminaliteit als expressie van levensstijl en loopbaan*. Arnhem: Gouda Quint, 1991.
67. Korf DJ: Jatten alle Junkies? *Tijdschrift voor Criminology* 1990; 32(2): 105-123.
68. Karsten CJ: Verslavingszorg heeft dringend behoefte aan een nieuwe visie. *NRC Handelsblad*, 26-11-1992.
69. Janssen O, Swierstra K: *Heroïnegebruikers in Nederland: een typologie van levensstijlen*. Groningen: Kriminologisch Instituut, 1982.
70. Beninger JR: *Trafficking in Drug Users: Professional Exchange Networks in the Control of Deviance*. London: Cambridge University Press, 1983.
71. Baxter E, Hopper K: The new mendicancy: Homeless in New York City. *American Journal of Orthopsychiatry* 1982; 52(3): 393-408.
72. Anonymous: Opvang jonge verslaafden schiet tekort. *NRC Handelsblad*, 21-11-1992.
73. Korf DJ, Hoogenhout HPH: *Zoden aan de dijk: Heroïnegebruikers en hun ervaringen met en waardering van de Amsterdamse drugshulpverlening*. Amsterdam: Instituut voor Sociale Geografie, Universiteit van Amsterdam, 1990.
74. Barendregt C: Personal communication, 1991.
75. Motie van Es, Kamerstukken II, 1981-1982, 16680 nr. 13.
76. Zwol C van: Rotterdam wil al zijn 250 straten 'opzomeran'. *NRC Handelsblad*, 27-11-1992.
77. Koolhoven M: Rage van Houseparty dreigt te ontsporen. *Telegraaf* 20-02-1992.
78. Loor A de: Het middel ecstasy bestaat niet. Een onderzoek. Amsterdam: Info/adviesburo Drugs, 1989.
79. Jamin J, Adelaars A, Blanken P: Adam & Eve. Monsters testen: de moeite waard? *Amsterdams Drug Tijdschrift* 1992; 9(3): 3-5.
80. Loor A de: Actuele stand van zaken van de XTC markt (memorandum) Amsterdam: Adviesburo Drugs August de Loor, 1992.
81. Anonymous: Curiosity, 'E': the facts. Information Flyer. Lifeline, Manchester.
82. McDermott P: Trick or treat. *The Face* 1992; no. 45: 45-46.
83. Stevens J: *Storming heaven: LSD and the American dream*. London: Paladin, 1989.

84. Stimson GV: The epidemiology of injecting drug use: a global assessment. State of the art lecture at VIII International Conference on AIDS / III STD World Congress, July 22, 1992, Amsterdam, The Netherlands.
85. Westermeyer J: The pro-heroin effects of anti opium laws in Asia. *Archives of General Psychiatry* 1976; 33:1135-1139.
86. Lansu A: Eddy Engelsman: "We moeten meer experimenteren" (interview). *Amsterdams Drug tijdschrift* 1992; 9(1): 3-4.
87. Grabowski J (ed.): Cocaine pharmacology, effects, and treatment of abuse. NIDA Research Monograph 50. Rockville, MD: NIDA, 1984.
88. Wilson MC, Hitomi M, Schuster CR: Self-administration of psychomotor stimulants as a function of unit dosage. *Psychopharmacologia (Berl.)* 1971; 22: 271-281. (cited in: Johanson CE: Assessment of the dependence potential of cocaine in animals. in Grabowski J (ed.): Cocaine pharmacology, effects, and treatment of abuse. NIDA Research Monograph 50. Rockville, MD: NIDA, 1984.)
89. Johanson CE: Assessment of the dependence potential of cocaine in animals. in Grabowski J (ed.): Cocaine pharmacology, effects, and treatment of abuse. NIDA Research Monograph 50. Rockville, MD: NIDA, 1984: 54-71.
90. Yanagita T: An experimental framework for evaluation of dependence liability in various types of drugs in monkeys. *Bull Narc* 1973; 25: 57-64.
91. Alexander B, Hadaway P, Coombs R: Rat park chronicle. *BC Medical Journal* 1980; 22(2): 54-56.
92. Wineck C: Physician narcotic addicts. In: Becker HS (ed.): *The other side: Perspectives on deviance*. New York: The Free Press, 1964: 261-280.
93. Goffman E: *Asylums: Essays on the social situation of mental patients and other inmates*. Garden City, NY: Anchor Books, 1961.
94. Buning E: Harm reduction is mainstream thinking. Presented at the 'second international conference on the reduction of drug related harm', Barcelona, Spain, March 1991.
95. Pearson G, Gilman M, McIver S: *Young people and heroin*. Aldershot: Gower, 1987.
96. Pearson G: Social deprivation, unemployment and patterns of heroin use. In Dorn N, South N (eds.): *A land fit for heroin? drug policies, prevention and practice*. London: Macmillan, 1987: 62-94.
97. Parker H, Bakx K, Newcombe R: *Living with heroin: The impact of a drugs 'epidemic' on an English Community*. Philadelphia: Open University Press, Milton Keynes, 1988.
98. Chein I, Gerrard DL, Lee RS, Rosenfeld E: *The road to H: Narcotics, delinquency, and social policy*. New York: Basic books, 1964.
99. Kort M de: Goede kwaliteit Nederland is juist argument vóór legalisering. *Volkskrant*, 21-08-1992.
100. Nieuwe Revu: XTC: levensgevaarlijke drug of onschuldige feestpil? *Nieuwe Revu* 1992; no. 14: 26-31.
101. Moll H: Groot aantal fouten gemaakt bij het oprollen van bende. *NRC Handelsblad*, 21-11-1992.
102. Broadhead RS, Heckathorn DD: User-driven VS. traditional outreach to combat AIDS among drug injectors: Assessing a national program and a new approach. Presented at the 8th International Conference on AIDS, July 19-24, 1992, Amsterdam, the Netherlands. [Po.D.5569]
103. Westermeyer J: Opium Dens: A social resource for addicts in Laos. *Archives of General Psychiatry* 1974; 31: 237-240.
104. Swift J (pseudonym for Newmeyer J): A short history of the conquest of the crack epidemic. *International Journal on Drug Policy* 1989; 1(3): 27-29.

105. AIDS policy in the Netherlands: Progress Report. Netherlands Ministry of Welfare, Health and Cultural Affairs, Rijswijk, the Netherlands, Januari 28, 1992.
106. Dam T van: The No-Risk Project: Peer Support as a Means of AIDS prevention. (abstract for the 4th International Conference on the Reduction of Drug Related Harm in Rotterdam, 14-18 March 1993.)
107. Beer M de, Trautmann F: Het modelproject 'AIDSpreventie voor en door prostitueés': 'Peer support als methode. Utrecht: NIAD, 1992.
108. Trautmann F: Het AIDS-preventieproject 'No-Risk': 'Peer support' als methode. Utrecht: NIAD, 1992.
109. Broadhead RS, Fox KJ: Takin' it to the streets: AIDS outreach as Ethnography. *Journal of Contemporary Ethnography* 1990; 19(3): 322-348.
110. Heckathorn DD: Collective sanctions and compliance norms: A formal theory of group mediated social control. *American Sociological Review* 1990; 55: 366-384.
111. Heckathorn DD: Collective sanctions and the creation of prisoner's dilemma norms. *American Journal of Sociology* 1988; 94: 535-562.
112. Connors MM: Risk perception, risk taking and risk management among intravenous drug users: implications for AIDS prevention. *Soc Sci Med* 1992; 34(6): 591-601.
113. Broadhead RS, Heckathorn DD: User-driven vs. traditional outreach to combat AIDS in rural America. Grant proposal to NIDA, unpublished manuscript, 1992.
114. Jong WM de: De sociale beweging van opiatengebruikers in Nederland. unpublished masters thesis, 1986.
115. Australian I.V. League: Drug use Australian style: The harm reduction issue. *Junkmail* 1992; 3(1,2).
116. Burrows D: Establishing and maintaining credibility as an injecting drug users group: street cred versus professionalism. Presented at the 6th International Conference on Drug Policy (Drug Policy Foundation) Washington DC, USA, 11-14 November 1992.
117. Broadhead RS, Heckathorn DD, Grund J-PC, Stern LS: Promoting risk reduction among injection drug users: A client-driven vs. a drug user union intervention. (abstract for the 4th International Conference on the Reduction of Drug Related Harm in Rotterdam, 14-18 March 1993.)
118. Ryker B: The development of consumer driven services for IDUs in New Zealand. (abstract for the 4th International Conference on the Reduction of Drug Related Harm in Rotterdam, 14-18 March 1993.)
119. Donaghoe MC, Dolan KA, Stimson GV: Life style factors and social circumstances of syringe sharing in injecting drug users. London: Center for Research on Drugs and Health Behaviour, 1991.
120. Anonymous: Verdiende kansen Ex-drugsverslaafden succesvol op de arbeidsmarkt. Amsterdam: koördinatiegroep 40-banen-experiment. stichting MHV, 1988.
121. Weeda C: Werkplan project banenbemiddeling. Utrecht: NIAD, 1991.
122. Reijneveld M: Huisarts en methadon. Consultatieve artsen exit; consultatie blijft. *Amsterdams Drug Tijdschrift* 1991; 8(1): 8-9.
123. Bos J, Grund J-PC, Vosskuhler D: Heroïne in de wijk! Blijft de hulpverlening er buiten? Rotterdam: SAR, 1983.
124. Lambert EY, wiebel WW: Introduction. In: Lambert EY (Ed.): The collection and interpretation of Data from Hidden populations, NIDA Research Monograph 98. Rockville, MD: NIDA, 1990: 1-3.
125. Turnbull CM: The mountain people. New York: Simon & Schuster, 1987.

126. Kaplan CD, Korf D, Sterk C: Temporal and Social contexts of heroin-using populations. An illustration of the snowball sampling technique. *Journal of Nervous and Mental Disease: Mental Disorders in their natural settings* 1987; 175: 566-575.
127. Meuller DP: Social networks, a promising direction for research on the relationship of the social environment and Psychiatric disorder. *Social Sciences and Medicine* 1980; 14: 147-161.
128. Vries MW de (ed.): *The experience op psychopathology: investigating mental disorders in their natural settings*. Cambridge: Cambridge University Press, 1992.
129. Lambert EY (Ed.): *The collection and interpretation of Data from Hidden populations*, NIDA Research Monograph 98. Rockville, MD: NIDA, 1990.
130. Wiebel WW: Identifying and gaining access to hidden populations. In: Lambert EY (Ed.): *The collection and interpretation of Data from Hidden populations*, NIDA Research Monograph 98. Rockville, MD: NIDA, 1990, pp 4-11.
131. Zinberg NE: *Drug, set, and setting: The basis for controlled intoxicant use*. New Haven: Yale University Press, 1984.
132. Anonymous: *Discussienota onderzoek Alcohol-, drug-, en tabaksbeleid 1991-1995*. Rijswijk: Ministry of Welfare, Public Health and Culture, 1991.
133. Jose B, Friedman SR, Neaigus A, Curtis R, Des Jarlais DC: 'Frontloading' is associated with HIV infection among drug injectors in New York City. presented at the VIII International Conference on AIDS, Amsterdam, The Netherlands, 19-24 July 1992. [Abstract Th.C.1551]
134. Gaughwin MD, Gowans E, Ali R, Burrell C: Bloody needles: the volumes of blood transferred in simulations of needlestick injuries and shared use of syringes for injection of intravenous drugs. *AIDS* 1991; 5: 1025-1027.

SUMMARY

Contents

Part I: The Study of Drug Taking Rituals

Part II: Drug Use Rituals, Health Problems and Drug Policy

Part III: Self-regulation, Drug Culture and Drug Policy

Part I: The Study of Drug Taking Rituals

The Behavioral Sequences Around the Use of Heroin and Cocaine

The present study confirmed the existence of two main heroin administration rituals with an uneven distribution --injecting, which was the main route for a minority of 23%, and smoking, almost exclusively chasing, which was generally applied by 77% of the research participants. There was a large overlap with cocaine administration rituals. Generally, heroin injectors inject cocaine (hydrochloride) as well, while most heroin smokers inhale vaporized cocaine (base), by way of chasing. However, during the course of the fieldwork a growing tendency towards smoking cocaine in a pipe (basing) was observed. In particular many smokers have adopted this practice, while they continue to chase heroin. A number of IDUs also applied this smoking technique.

Chapter four showed that the ingestion of heroin by both chasers and IDUs is subject to a fixed, stylized and predictable behavioral sequence, which a user must master through practice, observation of, and instruction from more experienced users. Therefore it fulfills the first condition for ritualization, a prescribed psychomotor sequence. Chapter four also provided the first documentation of the instrumental functionality of the observed drug taking rituals. All elements in the behavioral sequence and the employed paraphernalia have a defined purpose, which can be derived from observing the ritual as well as from the exegetic explanations offered by its performers.

A similar conclusion can be drawn regarding the ingestion of cocaine, whether it is used purely or in combination with heroin. In the late 1970s and early 1980s cocaine became widely available and used in the circles of regular heroin users. At the end of

the 1980s cocaine use has become rather endemic in this population --in the present study sample of active drug users 96% used both cocaine and heroin, while the prevalence of cocaine use among clients of the Rotterdam drug treatment agencies is almost 70%. The results presented in chapter five illustrate the powerful appeal cocaine has for the study participants, as they often went through great sacrifices to continue the use of this drug. Cocaine has thus 'nested' in ritual procedures developed around heroin use, which were initially less geared to the consumption of often large quantities cocaine. High level cocaine use brought about a large number of problems in the study population, such as craving escalation, resulting in 'binging' and increasing 'pill' use, which disturbed rather balanced heroin (-methadone) use patterns. Impaired judgment and outbreaks of violence, social withdrawal, paranoid thinking and depression could also be associated with high levels of cocaine use.

To counter these problems, existing heroin rituals were gradually adapted to integrate cocaine use. At first glance these adaptations may seem minor and rather insignificant. For example, little changed in the sequence of preparing a dose, especially for IDUs. Smokers smoothly extended their preparatory activities to include the cooking of base cocaine, using ammonia and, to a lesser degree, bicarbonate. These ritualized preparatory behaviors are generally highly standardized and instrumentally functional, whereas sometimes they are colored by idiosyncratic interpretations. Nevertheless, careful scrutiny shows that cocaine changed both the chasing and the injecting ritual significantly in several ways. Cocaine introduced a second, more potent, smoking ritual --basing-- and induced a variable daily ingestion pattern at an increased use frequency, in which cocaine and heroin are alternated, mixed or both. The latter change was directed at maintaining cocaine use, while simultaneously encountering the drug's adverse side effects. A major feature of this change is the altered position of heroin. It is an expression of the main instrumental function of drug use rituals --self-regulation.

Transitions between Administration Rituals

Chapter six investigated the transitions between smoking and injecting observed among the research participants. While variations of different cocaine/heroin combinations were common within the ritual of preference, transitions between

administration rituals were only infrequently observed. Besides a few rather idiosyncratic reasons, most of the observed transitions from smoking to injecting could be traced to economic pressure, the increased rush experience delivered by the injection and loss of control. The observations and several comments of respondents imply a strong association with cocaine use, for economic (smoking cocaine becomes too expensive) as well as for hedonistic (the better rush) reasons. Transitions in the opposite direction were often associated with attempts to regain control, especially over cocaine use or social pressure, for example when socializing with non- injectors or when working in a dealing collective of exclusively smokers. For some older long time injectors, smoking their drugs was the only option left open, as they literally ran out of accessible veins. Chapter six also documented some evidence for cultural/religious barriers to injecting among Moroccan and especially Surinamese users. The prevalence of injecting drug use among these minority users is far lower than average. However, in spite of such protective cultural barriers, injecting has increased, in particular among Moroccans. Again cocaine is implicated as a possible 'facilitator'.

Function and Meaning of Drug Use Rituals

The expressions of ritual observed around the administration of heroin and cocaine have important instrumental functions in the day-to-day management of drug use -- both in solitary and in social ritual situations-- and are significant in defining the social relationships between the drug users in their social networks. For this reason these behaviors have gained symbolic merit. The instrumental functions described in chapter seven center around maximizing the profits from a given dose of drugs, managing the level of drug use and balancing the positive and negative effects of the ingested drugs, and preventing secondary problems. Behavior directed at maximizing the drug effect can be observed in the preparation of the drug, in the actual administration and shortly thereafter. Through standardization of the behavioral sequence, which may contain behaviors that do and/or do not fit a means to an end scheme, users try to control the yield of the drug administration.

Standardization is also applied in controlling the level of intake and minimizing adverse effects. this is especially apparent in the ritual patterns that have been

developed around cocaine use, which besides giving intense euphoria has some well known negative consequences. Heroin plays a crucial role in controlling cocaine. Both drugs are used in patterns that optimize the desired effects while simultaneously curbing the undesired side effects of cocaine. The nesting of cocaine in heroin rituals has altered the function of heroin to a great extent. The drug has become intertwined and subservient to cocaine --it is used to modulate the effects of cocaine, which has taken over its function of primary source of pleasure. Maintaining these cocaine/heroin patterns requires a steady availability of money and/or drugs, which many users cannot sustain on a permanent basis. Then they resort to control strategies that include periodical abstinence (mostly of cocaine) and averting situations that can induce ritual interactions resulting in using. In contrast with stereotypical portrayals, it is concluded that the study participants put much effort in trying to control their drug use.

Chapter eight investigated instances of symbolic elaboration developed around drug taking behavior at the level of the individual drug user. Examples were found of ritual objects (e.g. drug paraphernalia) of which the construction or use enhances or symbolizes a positive outcome of the ritual sequence and reduces anxiety. Likewise, parts of the ritual sequence can become just as important as the complete process, as for the user they are indicative for the results of the whole procedure. Indications of 'special meaning' were further found in, what may be called obsessive performance of the ritual, or continued performance after the rationale was no longer present. This kind of behavior was particularly apparent in IDUs, who, for example, were observed to inject solutions containing drug quantities too minuscule to sort an effect. One may call such behavior 'hyper ritualization'.

Just as in any other social group, rituals are very important instruments in defining the social context of the drug subculture. They display and communicate the subcultural norms regarding social relationships and socially appropriate behavior. Chapter nine analyzed the social implications of the rituals and rules that have evolved around group drug use. An important function is the maintenance of the social structures that are essential for the satisfaction of the needs of drug users --the places and channels which secure the relatively undisturbed purchase and use of drugs. The so called 'house address', where drugs are sold and used, and where

users socialize, plays a crucial role in these structures. Within certain limits house addresses are tolerated by the police and this is communicated to the user community. Thus, house addresses are not under a constant threat of police busts and this resulted in a rather relaxed atmosphere at these places. The relative absence of ambiguity and anxiety over police interventions induced a clear set of rules, which are primarily aimed at securing dealing activities and use of purchased drugs. Whereas there is little fear of, for example undercover operations, only limited ritual interactions surround the actual drug transactions. The most successful house addresses are thus those with clear and strictly enforced house rules.

The most explicit social ritual has developed around the sharing of drugs, which is a very frequent activity. The drug sharing ritual can take a rather formal shape, as was observed in 'dyads' of IDUs, or be more casual, for example when drugs are shared in a 'pub-like' atmosphere among visitors of a house address. The sharing ritual is subject to several rules, e.g. regarding reciprocity and helping sick users. While some instrumental functions are apparent, for example preventing withdrawal, the drug sharing ritual symbolizes a broader pattern of social interaction in the drug subculture. Drug sharing expresses the almost universal subcultural rule of "share what you have" and is an important way to socialize and (re)establish relationships. In the latter sense it matches the cup of coffee (indeed, a drug) offered to a visitor. Drug sharing plays a crucial role in the social organization of drug users. It smothers conflicts and creates a special bond. It provides a feeling of identity and a support system, which satisfies basic human desires for intimacy, social solidarity and harmony. Therefore, the main social function of the drug sharing ritual is the maintenance of the drug using network and, ultimately, the drug subculture. These 'tribal' characteristics are shared with all other forms of human organization. Drug sharing is thus merely an expression of fundamental and normal human interaction.

Part II: Drug Use Rituals, Health Problems and Drug Policy

Part II of the dissertation reports on seven substudies concerning the relationship between drug use rituals, drug policy and health problems, in particular the spread of

HIV among IDUs. The literature study reported in chapter ten compares the (physical) health consequences of the two main administration rituals. It centers around the risk of (fatal) overdose and physical harm related to regular use. While under legal and controlled conditions injecting may perhaps be preferable, it is concluded that ,given the current condition of prohibition, smoking is a less harmful drug administration ritual.

Chapter eleven offers a comprehensive investigation of the HIV transmission risks associated with drug sharing among IDUs. The drug sharing techniques frontloading and backloading were not only observed in Rotterdam, but in several places in Europe and the USA. Recent American research confirmed the hypothesis of the presented study --a strong statistical association with HIV infection was found. As the prevalence of needle sharing is rather low in the Netherlands, frontloading is probably a main route of HIV spread in this country.

The subject of the study reported in chapter twelve is the sharing of needles, syringes and other injection paraphernalia. It was first of all concluded that needle sharing did not serve ritual purposes among the observed IDUs. This 'high-risk' activity appeared to be mainly determined by three factors: (i) (un)availability of sterile injection equipment, (ii) experience with the injecting ritual and its protective skills and (iii) drug craving, in particular for cocaine. While most IDUs in the study were relatively careful with syringes and needles, such caution was not extended to other injection attributes and materials. Spoons, filters and water containers were more than once casually shared, which indicates a serious lack of knowledge. The analysis further suggested that sharing of injecting paraphernalia may often be reinforced by deteriorated venous condition. Finally, the drug injection interactions discussed in the chapter were plotted to expose the hypothetical HIV transmission routes. This demonstrated the complexity of risk behavior associated with drug injecting in groups.

The question whether needle sharing can be considered a ritual interaction is the central issue of chapter thirteen. First, this chapter reviewed the literature on this issue. Several authors make bold statements regarding the ritual properties of needle sharing, but all fail to support these with data or relevant references. A questionable

practice of chain-referencing was found leading back to a study published in 1970. It was concluded that none of the reviewed papers offered substantial evidence for the thesis that needle sharing is a ritual. Ensuing, this chapter examined needle sharing in light of the relevant definitions of ritual and ritual object. It was demonstrated that the attachment of symbolic elaboration to the instrumental act of needle sharing is principally subject to the 'perceived availability' of drug injection equipment. Furthermore, injection equipment can only obtain 'secondary' ritual value, while drugs have 'intrinsic' or 'primary' ritual value, because of their direct relationship to the effect of the execution of the ritual. These two factors, the absence of standardized needle sharing patterns and the diminished functionality of needle sharing, due to (knowledge of) the HIV epidemic make the addition of special meaning to the instrumental act of needle sharing not likely. Even in the USA, where needle availability is severely restricted, there is no substantial evidence in support of ritual needle sharing. On the contrary, a growing number of scientific publications show significant behavior change towards safer injection practices. Finally, the chapter investigated the sources of some of the boldest statements on this issue and concluded that 'the needle sharing ritual' better qualifies as a deceptive political soundbite, used by high rank US officials in the 'war on drugs', than as a valid scientific concept.

From these studies and the international literature it has become clear that needle availability is an important factor underlying needle sharing. Not only structural scarcity but also situational --on-the-spot-- shortages can result in unsafe injecting practices. Therefore, the Rotterdam outreach program HADON cooperated with known IDUs to target unknown IDUs and significant places (e.g. house addresses) for delivery of clean needles. Chapter fourteen reports on a pilot evaluation study of this collective needle exchange program. The needle exchange patterns of the IDUs participating in this collective scheme are compared to those of users, who exchanged needles on an individual basis. It was found that this approach extended the reach of the program to a great degree and that it was well received in the IDU community. The results were, however, negatively influenced by police activities aimed at closing down places where drugs were used and sold. It is concluded that

engaging IDUs in peer group directed prevention efforts is both feasible and promising.

The following two chapters discuss some aspects of the relationship between drug policy and drug use rituals. Chapter fifteen focusses on the micro-ecology of the street based drug market at the central railway station zone in Rotterdam, where the more marginalized segment of the city's drug using population congregates. In contrast with elsewhere in Rotterdam one can purchase pre-processed smokable cocaine in this area. As has been explained in preceding chapters, most users prefer to prepare their own cocaine base from the cocaine hydrochloride bought at the house addresses. The marketing of 'cooked cocaine', which basically is crack, is an exception to this rule and can be explained by the specific ecological conditions characteristic for the Central Station zone. Because of the high concentration of passing travellers and the constant surveillance of the railroad police, there is neither time nor space to cook cocaine hydrochloride. This made the availability of a ready for use product functional to this group of drug users. It is furthermore a clear indication of the flexibility of the drug taking rituals in this population.

Chapter sixteen took a rather opposite approach and compared the drug use contexts in two very different cities. It described and explored certain patterns of drug use, sharing, and natural support systems found among IDUs in Rotterdam, the Netherlands and the Bronx, New York, USA. By specifying details of the micro-settings of everyday drug use in both locales, it became possible to identify certain common elements and consequences of personal and social behavior driven by drug use per se (e.g. drug preference), and to differentiate these from behaviors and consequences determined by drug policy and the social context in which drug use actually occurs. These policies and the social context they create could in turn be shown to relate to risks for HIV transmission, e.g. the increased likelihood of sharing injection equipment.

Part III: Self-regulation, Drug Culture and Drug Policy

The analysis of the drug taking rituals (and the rules they represent) presented in this dissertation demonstrated that rituals and rules are important regulatory agents in the lives of regular drug users. Furthermore, they are regulatory agents in more than one aspect. These social controls regulate the individual drug taking experience, but are equally important in determining social relations and socially appropriate conduct. In other words, rituals and rules help to make sense of the drug experience as well as of the social world in which these drugs are used. The latter feature is believed to be a basic function of ritual, both in traditional and (post) modern societies. In this perspective, the rituals of the study participants diverge thus little of those in other social groups. Only the object around which the ritual is organized (the ritual object) differs. Furthermore, economic (e.g. scarcity) and socio-cultural factors (e.g. subculture) play a crucial role in the formation, nature and maintenance of the observed rituals and rules. This relationship and its impact on the drug user's ability to regulate her/his drug using behavior is of great importance, in particular for public health and harm reduction considerations. Whereas several examples of non-compliance with these subcultural social controls were recorded in the present study, such infringements could generally be associated with certain specific conditions, which are best described as reduced 'drug availability' and/or limited 'life structure'.

Therefore, chapter seventeen explored the nature of, and interactions between Drug Availability, Life Structure, and Rituals and Rules. Based on this exploration it presented a hypothetical model of self-regulation based on these three clusters. The presented model builds on and elaborates the theory of the late Norman Zinberg. The results of the present study suggest that cocaine/heroin users, who are successfully involved in dealing experience considerably less drug related problems and are more capable in regulating their use, although they generally use more cocaine. This can be explained as follows. Successful user/dealers are in a position of sufficient drug availability. This prevents fixation on (obtaining) the drug and allows for the formation and maintenance of regulating rituals and rules, which, in turn, support the degree of life structure required for maintaining dealing activities that generate the necessary resources to maintain drug availability. Generalization of this reasoning lead to the formulation of the following hypothetical model: Drug Availability, Rituals and Rules, and Life Structure are a trinity --interactive factors in an internally coherent circular

process, in which these factors are themselves modulated (modified, corrected, strengthened, etc.) by their outcomes. It is thus a 'feedback circuit' that determines the strength of self-regulation processes controlling drug use. The chapter further discussed the impact of certain external factors on the model, in particular drug policy. Exploring and comparing certain aspects of prohibition and legalization, the chapter concluded that prohibition interferes with the natural processes underlying self-regulation. Legalization, at the other hand, is not an instant remedy for this interference, but merely paves the way for alternative drug control policies, outside of criminal law, which are expected to facilitate natural processes of self-regulation.

Whereas ritual is the basic element of culture, chapter eighteen addressed the drug phenomenon on the level of the compound --the drug using culture itself. It discussed the cultural developments around heroin, cannabis and MDMA in the Netherlands and their relationship with Dutch drug policy. The chapter furthermore explored new directions for drug policy and practice, building on the successes of the Dutch 'normalization' policy.

AN OVERVIEW OF THE CONCLUSIONS

1. The ingestion of heroin and/or cocaine by way of smoking (primarily chasing and to a lesser extent basing) and injecting fulfill the conditions for ritualization. The behavioral sequences are highly standardized and stylized, and of special meaning to the performers. They are highly functional in the process of getting high. (Ch. 4 and 5; R.Q. 1.1)
2. The drug administration rituals of the observed drug users are, in general, rather stable. Transitions between smoking (primarily chasing) and injecting rituals were only infrequently observed. When occurring, these were associated with availability, (loosing or regaining) control over drug use, social pressure, or hedonistic motives. (Ch. 6; R.Q. 1.2)
3. Cocaine has become the engine of the former heroin scene. It is used in varying combinations with heroin. The addition of cocaine has resulted in a large number of (psycho- social) problems in the study population, and is associated with initiation into injecting. Basing may be a precursor for cocaine injecting. These problems are for a large part related to the low 'subjective' availability of the drug. Cocaine has disturbed rather controlled heroin/(methadone) use patterns. Its use has been nested in rituals developed for heroin use and taken over its function of primary source of pleasure. As a result, a functional relationship between heroin and cocaine has been established. Heroin use has become almost completely intertwined with and subservient to cocaine use. It is mainly used to modulate the effects of cocaine, in particular to ameliorate cocaine's disturbing side effects. (Ch. 5 and 7; R.Q. 1.1, 1.2, 1.5 and 1.7)
4. Both the smoking and the injecting ritual fulfill important instrumental functions, such as maximizing the yield of a given dose of drugs; controlling the level of drug use and managing positive and negative effects of the drugs; and preventing secondary problems. These instrumental functions are represented in the construction of the paraphernalia, as well as by the behavioral sequences themselves. (Ch. 4, 5 and 7; R.Q. 1.5 and 1.7)
5. Both administration rituals contain elements of symbolic elaboration. The construction and use of certain paraphernalia, certain ritual cues, parts of the sequence, and the order of the sequence can obtain a power beyond the instrumental functionality --they can for example invoke the start of a ritual sequence (getting high), enhance the experience of the drug effect, and reduce anxiety. The data suggests that symbolic elaboration is stronger among IDUs. (Ch. 8; R.Q. 1.5 and 1.6)
6. The social functions of the drug administration rituals are most obvious in the recurrent sharing of drugs. Drug sharing includes instrumental functions, e.g. preventing withdrawal, but is also an important means to socialize, establish and reinforce relationships and is ultimately aimed at maintaining the social network/subculture. The sharing ritual is subjected to several rules, e.g. regarding reciprocity. Drug sharing is not unique for illegal drug users, but resembles a fundamental and normal human behavior. (Ch. 9; R.Q. 1.3, 1.4, 1.5, 1.6 and 1.7)
7. In terms of the risks of overdose, physical harm, and communicable diseases it is clear that, given the current conditions of prohibition, the smoking ritual entails less health risks than injecting. (Ch. 10; R.Q. 2.1)
8. Syringe mediated drug sharing techniques, such as frontloading and backloading can transmit HIV and other microbiological infections when unsterile syringes are used. In the Netherlands frontloading may well be a major route of HIV infection. Drug sharing situations often entail multiple possibilities of transmission. (Ch. 11, 12; R.Q. 2.2)

9. Needle sharing is primarily determined by the structural or situational availability of needles, while drug craving and inexperience with the injecting ritual are important additional factors. Because of a lack of knowledge, other injection paraphernalia are often casually shared. (Ch. 12; R.Q. 2.3)
10. The thesis that needle sharing is a ritual cannot be supported by substantial evidence in the scientific literature. In general, needle sharing cannot be considered a ritualized behavior pattern, as the behavioral sequence does not fulfill the requirements of the relevant definitions. (Ch. 13; R.Q. 2.4)
11. Engaging active IDU's in HIV prevention activities is an necessary and feasible approach. They have access to places and populations which are not accessible for traditional service providers and can utilize their natural information and exchange networks. (Ch. 14; R.Q. 3.2)
12. As a general rule, crack is not available in the Netherlands. Dutch cocaine (and heroin) smokers prefer to prepare the cocaine base themselves, and economic pressure towards preprocessed cocaine base is absent. Only under the specific ecological and socio-political conditions of the Rotterdam Central Railway Station a preprocessed product, 'cooked cocaine' has emerged. Currently, this phenomenon is well contained. However, (local) policy changes affecting the availability of cocaine as well as the time and space allocations of drug users -- that is, when they are pressured into the streets--, may result in entrepreneurial adaptations towards middle market level distribution of base cocaine (a.k.a. crack). (Ch. 15; R.Q. 3.1)
13. Cross cultural comparisons of patterns of drug use produce interesting data about the influence of the social context of use and drug policy, on the construction of drug problems, and about the extent to which these factors impact on the risk for HIV transmission. (Ch. 16; R.Q. 3.1)
14. Whether drug use is controlled or uncontrolled depends on the application of rituals and rules, which constrain and regulate use patterns. The nature of these rituals and rules is determined by the availability of drugs. A sufficient availability allows for the formation of a set of rituals and rules aimed at safe and controlled use. A high life structure provides the incentive and the structure to maintain a 'controlled' availability and apply regulating rituals and rules. Strict enforcement of drug prohibition has a negative impact on all three factors, hampers effective self-regulation processes and induces a survival oriented subculture. (Ch. 17 and 18; R.Q. 1.7, 1.8, 1.9 and 3.1)
15. The Dutch normalization policy is in need of revitalization. The leading policy incentive should be shifted from containment of problematic drug use and management of drug related problems, towards actively influencing the nature of drug use and directing drug using cultures towards less harmful patterns of use. This new policy must allow for a controlled availability of drugs through a wider application of the expediency principle; by way of culturally sensitive intervention studies stimulate the formation of safe use norms; and adapt the existing service system to make it more responsive to the needs of consumers, change the belief systems of current problematic drug users so as to instill a sense of entitlement and belonging to the community at large, and, by so doing, induce the concrete quality of life improvements by which they can improve their own life structure. (Ch. 18; R.Q. 3.2 and 3.3)
16. Future drug use research in the Netherlands should concentrate on the factors that determine self-regulation processes. Developing and evaluating effective community based interventions to curb the spread of HIV constitutes an equally important research priority. (Ch. 18; R.Q. 3.3)

17. The preponderant influence (drug) availability plays in the daily lives of the study participants is perhaps the most conspicuous and consistent finding of this study. (all chapters; R.Q. 1.2, 1.3, 1.8, 1.9, 2.3, 2.4 and 3.1)

GLOSSARY OF MEDICAL TERMS

abscess : localized collection of pus produced by pyrogenic (heat, or fever, producing) organisms

acute transverse myelitis : syndrome transecting, or cutting across, both internal and external areas of the spinal cord

alveolar hemorrhage : bleeding of the airsacs in the lung

aneurysm : a segment of weakened blood vessel (usually an artery) which has filled with blood and ballooned outward

arrhythmia : deviation of normal rhythm, e.g. of the heart

ascending aorta : the largest ascending (rising) blood vessel of the arterial system, stemming from the main artery leaving the heart

aspiration pneumonia : pathological consequence of abnormal entry of fluids, particulate matter, or secretions into lower airways; e.g. inhalation of vomitus

atelectasis : airlessness of the lung's alveoli; "solid lung"

brachial and lumbar plexus : the part of the central nervous system (spinal cord) innervating the limbs

barotrauma : injury due to a change of air or water pressure, e.g. ruptured eardrum

bronchospasm : sudden constriction of bronchial tubes (windpipe)

Brown-Sequard syndrome : spinal cord damage hallmarked by spasms and decreased sense of posture, heat, cold, and pain

candida : a fungus (also known as yeast or thrush) of the human mouth, throat, vagina, gut and skin which can spread or overgrow, producing infection and disease

carotid and subclavian arteries : arteries bringing blood to the head, neck and upper trunk

carbonaceous sputum : black, tarry sputum (chest mucus)

cellulitis : inflammation of connective tissue, frequently loose subcutaneous tissue

COPD : chronic obstructive pulmonary disease (also called chronic obstructive lung disease); generalized small airway obstruction associated with chronic bronchitis, asthma and emphysema

disease : a particular destructive process, with characteristic symptoms, and a specific cause

dissection : separation of tissues (by cutting); arterial dissection = longitudinal cleavage of the blood vessel

dyspnea : difficulty in, or labored, breathing

edema : abnormal accumulation of fluid in body tissues

embolism : an air bubble or solid particle (ex: blood clot, fat globule, tumor cells, insoluble contaminants of inoculum) impacted in, and causing obstruction of, a blood vessel

encephalopathy
general term describing any disease of the brain

endocarditis : inflammation of the membrane which lines the heart and covers the heart valves

endophthalmitis : infection of internal eyeball

fibrosis : formation of excessive fibrous tissue in a body structure

gangrene : death of a portion of body tissue, due to inadequate blood supply, direct traumatic injury or infection

gastrointestinal tract : digestive tract: stomach and intestines

granuloma : a tumor, caused by an outgrowth of new capillaries and connective tissue cells from the surface of an open wound

granulomatous rhinitis : inflammation and granuloma formation of the nasal mucosa, sometimes causing destruction of soft tissue, cartilage and bone

hemopneumothorax : blood and air in the pleural (chest) cavity causing compression of lung tissue

hypothermia : below normal body temperature, undercooling

idiopathic : of unknown origin

laryngeal edema : excess fluid in the larynx (voicebox)

leukoencephalopathy : rare, rapidly progressive, viral central nervous system disorder, destructive to nerve fiber and occurring typically in those with immune system disorders (for example: leukemia, lymphoma, or HIV disease)

myelitis : inflammation of the spinal cord

myocardial infarction : a "heart attack" caused by occlusion (closure, blockage) of the coronary arteries

necrosis : localized death of body tissue

optic neuropathy : inflammation of part of the optic nerve causing partial or total visual loss

pericardium : the doublemembrane sac containing the heart

pneumonia : inflammation of the lung in which fluid and cells from the inflamed tissues fill the air spaces, making breathing difficult

pneumothorax : air or gas in pleural (chest) cavity compressing and sometimes collapsing the lung(s)

pneumomediastinum : free air in the central space of chest (the space between lungs)

pneumopericardium : air or gas between the layers of the membrane encasing the heart

pseudoaneurysm : a bloodclotlined cavity in an arterial wall, caused by rupture of the blood vessel

pulmonary edema : leakage of extravascular fluid into lung tissue and air vesicles (alveoli); waterlogged lungs

pulmonary embolism : obstruction of the lung vessel(s) by solid or gaseous matter, for example: a blood clot or air bubble

pulmonary talcosis : talc granulomatosis causing pulmonary fibrosis; accumulations of connective tissue in the alveoli, reducing (and potentially blocking) oxygen uptake from inhaled air

reactive airway disease : diffuse, intermittent, reversible airway obstruction caused by the inhalation of irritant or allergenic particles or vapors

renal failure : general term for the derangement and insufficiency of renal excretory and regulatory function; kidney failure

retinal embolus : emboli blocking one of the tiny blood vessels in the retina (the lightsensitive internal coat of the eyeball)

rhabdomyolysis : a type of acute renal failure (seen in "crush" syndrome and paroxysmal idiopathic myoglobinuria) causing extensive trauma to, or destruction of, muscle tissue

rhinitis : inflammation of the nasal mucous membrane characterized by vasodilation, edema, nasal discharge and obstruction

septic arthritis : inflammation of a joint secondary to infection with any pathogenic bacteria, fungus, virus or parasite

sinusitis : inflammation of the paranasal sinuses (the cavities near the nose)

syndrome : a group of coinciding symptoms which produce a pattern typical of a particular condition or disease

thrombocytopenic purpura : a syndrome characterized by low blood platelet count, intermittent mucosal bleeding, and purple patches (purpura) on skin

thrombophlebitis : inflammation of a vein wall caused by a blood clot in the vein

toxic amblyopia : damage to the optic nerve and reduced ability to see caused by reaction to a poisonous substance

Valsalva maneuver : 1) forcible inflation of the middle ear by strong expiratory effort made with a closed mouth and pinched nostrils (what airplane passengers do during landing) or 2) forcible exhalation against closed glottis (closed "throat"); the increased chest pressure which develops causes increased heart rate and blood pressure

wound botulism : neuromuscular poisoning resulting from infection with (*C. botulinum*) an anaerobic bacteria